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ABSTRACT

The report examines issues involved in mainstreaming handicapped students in Sweden. M. Soder analyzes concepts, research, and research needs in the first paper on mentaly retarded students. He suggests that the major problem is lack of cooperation among teachers. In the second paper, K. Norden and T. Ang review the concepts of integration and normalization and cite psychological implications for hearing impaired students. The third paper, by H. Svensson, analyzes the situation for visually impaired students and suggests early identification, diagnosis, and stimulation as the targets of future research. K. Paulsson's paper on the integration of physically handicapped students concludes the volume with information on cultural, psychological, and psychosocial problems facing physically handicapped students. (CL)

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RESEARCH AND DEVELOPMENT CONCERNING INTEGRATION OF HANDICAPPED PUPILS INTO THE ORDINARY SCHOOL SYSTEM

Stockholm, 1980

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Karin Paulsson

FOREWORD

This report is an attempt to satisfy a need for basic information concerning problems associated with integration of handicapped pupils into the ordinary school system.

The four parts of the report are a result of a great many people's discussions and work. The named authors are responsible for the major part, however. They are also entirely responsible for the content. On the cover page to each sub-report, a brief mention is given to those people other than the authors who have taken part in the work. The report (Swedish version) has been drawn up mainly during the Autumn of 1978.

The report does not claim to present a full picture of the contribution made by research and development. Resources and practical circumstances have compelled us to draw the line at a certain point for each part. Despite this, the report contains material which can serve as a source of information for longrange research and development planning, policy issues, inservice training etc.

Esse Lövgren

Lars Wilhelmson

PART I Mentally retarded children

SCHOOL INTEGRATION OF THE MENTALLY RETARDED - analysis of concepts, research and research needs

Mårten Söder

The reference group has met three times and has also served as an advisory body to the author.

The members of the group were as follows:

Margaretha Finnhammar, educational adviser
Rune Galerius, documentation secretary
Ann Hernnsdorf, psychologist
Lars Kebbon, research fellow
Gunnar Kylén, research fellow
Lars Wilhelmsson, project secretary

One of the three meetings of the group was also attended by Brage Normark, assistant special school inspector, Lennart Wessman, special school inspector, and Lilly Vävare, educational adviser.

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Notes:

1) The term "comprehensive school" is used to denote Swedish "grundskolan", a blanket term for the years of compulsory schooling (7-16) covering primary, middle and senior levels but excluding the sixth-form college, used here to denote Swedish "gymnasium". No contrast with grammar school etc is implied for the purposes of this report.

2) SIA is short for "skolans inre arbete" which means "the internal organisation of school activities". The goal of the SIA reform is to create a more stimulating school environment. In order to meet the needs of different pupils better, particularly the "exceptional" pupil, SIA recommends a more flexible organisation of groupings of pupils, teamworking staaf, and more opportunities for contact with organisations and activities in society at large.

1 ANALYSIS OF CONCEPTS

The term integration has in a great many connections, not least of all in the world of education, acquired a diffuse meaning. In the case of integration of the handicapped into the school, this diffuseness may be related to a more general ideology, or a general view, which lends the term positive overtones ensuing from certain assumptions about the nature of handicap and school. We shall be taking this "integrationist view" as the starting point of a conceptual analysis. We shall first present the main features of this view, critically examine some of its assumptions and consequences and finally present a conceptual structure based on differentiation between various forms of integration.

1.1 The integrationist view

The brief presentation made here of what we are referring to as the integrationist view is somewhat "tendentious". The lack of space makes tendentiousness a necessity. But also in order to draw attention to some of the assumptions and consequences related to this view, which are seldom consciously expressed, a certain tendentiousness is necessary.

The end of the sixties saw the formulation of the principle of normalisation and the principle of integration as the guiding ideological lights in welfare services for the mentally retarded. The mentally retarded were to have a life on the same conditions as normal people, as far as was possible, and they were to live and go to school with other people and not be isolated in special institutions. Both the principle of normalization and the ideas regarding integration were, as ideas, largely a reaction to a previously dominant view which had resulted in segregative measures such as placement in institutions and in segregated schools. This "segrationist" view was totally dominant in the welfare services during the period between the two World Wars. During the fifties and sixties, it gradually declined in importance.

On a number of central points, the integrationist view stands in vivid contrast to the segregationist view. One such point of contrast is represented by the view of what constitutes a handicap.

The segregationist view saw mental retardation as a characteristic of the individual. The defect was an absolute, individual characteristic and nothing could be done about it. The mental retardation was unalterable. The integrationist view, on the other hand, stresses the relativity of the handicap. No qualities are handicaps per se. They only become handicaps in a given and defined environment. When demands and expectations are made of the individual, certain qualities or weaknesses emerge as handicaps. The handicap is a product of the individual-environment relationship. This element of relativism in this view is also combined with a more optimistic belief in the development potential of mentally retarded people than had been the case in the past. The static pessimism of the segregationist view was superseded by the more dynamic optimism of the integrationist viewpoint.

Even on the question of what measures should be taken on behalf of the mentally retarded, these two views are diametrically opposed. The segregationist view saw mentally retarded people as defective individuals. The condition was unalterable and the appropriate action was to separate them from the rest of society. Segregation was seen largely as adaptation to the natural order of things, which consisted in these people being qualitatively different from others. Segregation was an integral part of nature.

According to the integrationist view, integration is seen as the "natural" condition. First and foremost we are all similar in a number of respects. But, due to the demands made by the environment, some individuals, because of individual "weaknesses", are separated off and segregated. The chief element in the environment operating in a segregative manner is the socio-political or special educational measures which are taken. It is these measures which constitute the most important segregative mechanism. Underlying these lines of argument are often theoretical notions associated with theories of labelling. The socio-political/special educational measures taken act to label and stigmatize. The deviating individual is assigned a degrading label which restricts the possibility of him

passing for "normal". Apart from the label itself, segregation is intensified by measures separating him from "normal" life and "normal" contact with people. By focusing on official measures, these came to be regarded as the most important source of labelling. It is by means of these measures that natural integration is disrupted and people are separated, segregated.

If it is the various measures of a socio-political or special educational nature which created segregation, it is also these measures which should be changed if integration is to be achieved. In this way, integration is also linked to decisions on placement and treatment which the decision-making authority has control over.

In schools, this finds expression in the fact that integration is more often than not regarded as synonymous with a special form of placement. Being in an ordinary class is thus "more integrated" than being in a special class, which, in turn, is "more integrated" than attending a special school, however. In practice, integrative measures are those which separate the individual as little as possible from the natural context of which he forms a part.

Thus, in summary, the integrationist view has the following features:

- The handicap is relative. It arises in relation to the environment.
- Mentally retarded people are capable of advancement.
- Integration is a "natural" state. First and foremost, we are all similar in a number of respects.
- The major cause of segregation is the separating and labelling nature of official measures.
- Integration is synonymous with official measures which are the least separative and labelling as possible.

1.2 Critique of the integrationist view

The most striking problem with the integrationist view described above concerns the tendency to equate integration with placement in one or another form of school.

This has resulted in the majority of writers who have dealt with the question of integrating handicapped pupils into school having devised different concepts in order to differentiate between integration in the sense of placement on the one hand and a more "genuine" or "meaningful" form of integration on the other hand (see e.g. Asmervik '76; Dalen '77; Wolfensberger '72). Different writers use different concepts for these different forms of integration. What is common to them, however, is a wish to keep apart a more superficial form of mixing handicapped and non-handicapped persons (referred to as structural integration, organisational integration, physical integration, for example) from a more genuine and psychologically meaningful integration (often referred to as social integration). As distinct from the superficial form of mixing, it is stressed that the more genuine form of integration assumes that social relations will be established between the handicapped and the non-handicapped. A number of writers also emphasize the handicapped person's feeling of security in these relations as a criterion of meaningful integration. By drawing such a distinction, one of the fundamental assumptions of the integrationist view is also brought into question, this being that the most important segregative mechanism is the socio-political/special educational measures taken on behalf of the handicapped. The question implicit in the above distinction is this: To what extent does integration in the form of certain placement decisions lead to social integration? If "integrated placement" does not automatically result in social integration, this may be because the obstacle to integration of this type is not a question of placement but rather that the obstacle is to be found in the "normal" environments in which the handicapped person is placed. The segregative mechanism is to be found in the social reality. By tending to disregard this, the integrationist view easily falls into romanticising reality. Social reality is seen as a large and all-embracing community, in which deviants are automatically integrated as decisions are taken to place them there. The ambition of placing the handicapped in "normal" contexts easily results in these "normal" contexts being idealised.

This is a consequence of viewing official measures as the primary source of labelling. In the bid to avoid labelling and segregative measures, the segregative mechanisms which are actually to be found in reality - in the "normal" environments - are disregarded.

But, even if we make a distinction between forms of integration on the lines outlined above, it still remains that integration is tied up with school. It is in the here and now situation at school that the mentally retarded person is integrated - regardless of whether we mean placement or social integration. In conjunction with the integrationist view, this form of integration is often presented as synonymous with the mentally retarded person being integrated into society. The school is not, however, the same as society. The school is an institution whose function is to socialise the pupils for a future role as adults in society.

Integration into the school can, therefore, hardly be the same as integration into society. If by societal integration we mean that a person, as an adult, is able to influence his/her own situation, has access to communal resources, has a productive working role and is part of a social community with other people, the question may be posed of the relation between integration into the school and societal integration. A common way of defining this relation is to say that integration into school constitutes a means to the end of societal integration (see e.g. Dalen op.cit; Magne 1976).

Is then the goal of integrating mentally retarded children in schools that they, as adults, be integrated into society? One method of testing this is to look at what aims the school has vis-à-vis the mentally retarded pupils. The aims of school such as they are formulated in Section 1 of the Education Act have their direct equivalent in the case of the special school in § 19 of the Social Welfare Act (Mentally Retarded Persons). Here it is stated that the aim of the school is to "promote the development of the pupils into harmonious people and into competent and responsible adults". Thus far the aims of the ordinary school and those of the special school concur. But if we read more about the aims of the school, in the section entitled Aims and Guidelines for the Comprehensive School[1] Curriculum (Comprehensive School Curriculum 1969) on the one hand and the Special School Curriculum (Special School Curriculum 1973)

[1] See note after list of contents.

on the other hand, we find many differences. Here we find that in the special school, in getting to know the individual pupil one is to "endeavour to promote his personal development" (p 6) where as in similar manner, in the comprehensive school, one is to "endeavour to promote his personal maturity into a free, independent and harmonious person" (p 10). Whereas in the special school one is to "develop all aspects of the pupil, encourage alertness, provide motivation for study and work and promote emotional balance" (p 6), the pupils at the comprehensive school are to "prepare themselves for their roles as active citizens in the society of tomorrow" (p 10). In the special school, each pupil is to be brought to "develop his various qualities and come to terms with personal problems" (p 6), whereas his peers at the comprehensive school are "in the long term, to be a positively creative power in the development of society" (p 11).

This comparison between the aims of the ordinary school and the special school makes it obvious that the aims of the special school centre more on the individual than those of the ordinary school. The special school is to do something with its pupils. In the ordinary school system, the pupil is to be provided with assistance in doing something for himself and for his environment. The aim of the special school is to produce well-adjusted and harmonious mentally retarded adults who are able to deal with personal problems. The ordinary school system is to produce active, productive and critical citizens who are capable of active participation in forming society.

Societal integration as we have defined it above, is clearly an explicit goal of ordinary school activity - but not of special school activity. The integrationist view tends to equate school integration with societal integration or at least to see the relation between them as non-problematic. But in this respect, the curricula are more explicit. If there is no special school goal of societal integration for mentally retarded people in adult life, one can hardly assert that integration has such a goal.

Let us then return to integration into school. As we have seen, the emphasis of the integrationist view on integration as a form of placement decision results in a disregard for the complications which arise by virtue of the fact that the segregative mechanisms exist

in social reality. But even if one stresses the importance of societal integration, as do the writers referred to above, certain problems remain.

The aims of the special school are, as we have seen, not formulated in terms of societal integration. But this does not mean that the special school has no aims as regard the adult life of the pupil. In order to "promote the development of the pupils into harmonious people and competent and responsible members of society", special demands are made in the special school. Many of these demands are related to aims associated with the development of the pupil's personality. This development of personality, however, makes special demands on the teaching situation for the mentally retarded. "Pupils in the special school are characterized by at least equally great individual variations as pupils in other forms of school. In addition to this, special difficulties, which also require special measures, are present to a very high degree. Therefore, the need to gear teaching to the individual level and special characteristics of each pupil in various areas of learning and training is particularly cogent." (Special School Curriculum 1973 p 10. For a more detailed description of the special psychological characteristics of the mentally retarded, see Special School Curriculum 1973 pages 10-16 and the Special Curriculum Supplement, "The personality structure of the special school pupil".) The special measures required consist of smaller groups for tuition and more resources in a variety of respects than what is usual in the ordinary school system.

But these demands for specially arranged learning situations always produce segregation in some form or other. If the goal is social integration, one must then question these educational demands. Here, there is an obvious conflict between the aims of social integration and the educational demands ensuing from curriculum aims concerning development of personality and "competent and responsible" adults.

In most cases, the integrationist view obscures this conflict of aims. This view takes a placement decision to be synonymous with social integration and this is seldom related to the other aims of the school.

The conflict between educational and social goals has not been so prominent as yet in the case of integration of the special school for mentally retarded. This relates to the fact that integration of the special elementary school and the training school has taken the form of 'facility'[1] integration; they have been assigned classrooms in ordinary school buildings, but have still been taught in separate special school classes. This conflict comes to a head, however, where individual integration is involved; when the mentally retarded pupils go into ordinary classes. This is generally regarded as the most far-reaching form of integration - "total integration". The underlying assumption is that a placement in an ordinary class automatically results in social integration. But, in a sense, integration of this type also means that the mentally retarded pupil is confronted with the segregative mechanisms existing in the social reality represented by the class. In a sense, when the pupil attends an ordinary class, he is part of a social context. He forms part of the group and cannot avoid influencing and being influenced by the social mechanisms of interaction to be found there. But the social relations he encounters can, of course, vary from the propitious community of a group to outright hostility.

At the same time, where individual integration is pursued, the conflict between the possible gains one might make in social relations and the educational demands ensuing from the curriculum becomes manifest. The "normal" school environment articulates and puts a premium on those very intellectual achievements which the mentally retarded pupil's mental disability does not allow him to produce. In the same way as is the case with social segregation, it is the "normal" school environment which operates in a segregative manner.

The problems we have drawn attention to here in connection with the integrationist view, are all more or less direct consequences of the view of segregation ensuing from this overall view. Dictionary definitions of the term integration tell us that integration means to unite separate parts in a whole. A fundamental element of one's view of integration, therefore, is the notion one has of how these separate parts have arisen. According to a traditionally segregative

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[1] The term facility integration is used here in this report to denote a situation where special school pupils use the same premises as ordinary school pupils but attend different classes and stands in contrast to "individual integration", which denotes integration of individual handicapped pupils into ordinary classes.

view, this separation was given by nature. The mentally retarded are different by nature and our task is to discover this and gear our action to this fact. According to the integrationist view detachment of the mentally retarded as a "separate part" arises as a result of the socio-political/special educational contrivances of official bodies. Our task - uniting the parts into a whole - consists in bringing the retarded into the community from which they have been excluded. (An interesting paradox in this view, incidentally, is that no integration in this sense is possible without first making a decision entailing "separative" placement. The natural whole is separated by the same type of decision which integration itself subsequently implies). But this view then disregards the fact that segregation takes place in our society and in our schools irrespective of such official action. The educational and social mechanisms of segregation are a part of the reality of the "normal" school.

It is from this erroneous view that the problems in what we have called the integrationist view arise. The most important of these problems as we have formulated them are in summary:

- Romanticisation of "the normal"
- By equating integration with a placement decision, the difference between "formal" integration of this type and social integration is not perceived
- An uncritical approach to the question of the relation between school integration and societal integration
- Emphasis on social goals at the expense of educational ones.

1.3 Different forms of integration

We have already used a number of different concepts for different forms of integration. Here we shall specify and define these more closely. These concepts have formed the starting point for studies of special school facility integration. The primary objective has been to obtain a conceptual framework making it possible to describe various aspects of this. The concepts have also been used to examine the various goals associated with this form of integration.

The different forms of integration we are discussing originate to a large degree in the criticism of a diffuse and indiscriminate use of the integration concept referred to above. We have accordingly taken account of the obvious need to distinguish "integration as a placement decision" from social integration. We have also taken account of the discussions conducted on the subject of integration in school as an end in itself or as a means to achieve what we have previously defined as societal integration.

We differentiate between four different forms of integration: physical, functional, social and societal.

By physical integration we mean the physical distance between the mentally retarded and non-retarded being reduced. Physical integration thus entails a geographical approachment of these groups in relation to each other. In relation to facility integration of the special school, we regard physical integration operationally as a question of the situation of special school teaching premises in relation to the ordinary school.

By functional integration we mean the functional distance between the two groups being reduced. Functional distance arises when the groups use different equipment and resources. Functional integration is therefore a question of joint utilization of resources in a wide sense. This joint utilization of resources can take many forms. In order to include all the different forms of this arising in conjunction with facility integration of special school, we distinguish between three forms of functional integration. The first is co-utilization of resources. If this co-utilization takes place on the same occasion, we talk of simultaneous utilization. A special form of simultaneous utilization is constituted by the third form of functional integration, this being that co-operation takes place on a variety of activities planned in advance. We call this quite simply co-operation.

Social integration entails the social distance between the mentally retarded and the non-retarded being reduced. Social distance includes both distance in the form of absence of interaction and distance reflected in a psychological feeling of being cut off. The mentally retarded are socially integrated if they form part of a community with

non-retarded persons; come into regular and spontaneous contact with these and are felt to be by them and feel themselves to be a natural part of the group.

Societal integration, finally, signifies that the mentally retarded have, as adults, the same access to resources as others, the same opportunity of influencing their own situation, have a productive working role and form part of a social community with others.

There are a great many other concepts connected with the discussion of integration. Many of these are completely or partly synonymous with each other and with the concepts we have used here. A survey of how the concepts presented here relate to some of the other common concepts used on the subject is given in figure 1.

Figure 1 Summary of some different concepts for integration in relation to physical, functional, social and societal integration

		FUNCTIONAL INTEGRATION				
Our concepts	PHYSICAL INTEGR.	Co-utilization	Simultaneous utilization	Co-operation	SOCIAL INTERGR.	SOCIETAL INTEGR.
Synonyms	Facility integr. Organisational integr. Formal integration Structural integration	Adminstative integr.		Activity integr. Subject integr. Spot integr.	Psychologically experienced integr.	

In this connection, facility integration may well be regarded as an operational equivalent of what we refer to as physical integration. To the extent that administrative integration denotes that there is a joint organisation administrating matters concerning both the special school and the ordinary school, this may be regarded as a form of co-utilization of resources - a form of functional integration. The term organisational integration, used in various connections, is somewhat woolly, but usually corresponds to physical integration and a certain degree of joint utilization of resources. The term structural integration as used by Asmervik (op.cit.) has the same meaning.

Activity integration is a broad term which covers most things that co-operation may imply. Subject integration comprises the co-operation which takes place in certain subjects between, for instance, a class from a special school and a class in ordinary school. Spot integration covers the cases of co-operation on certain occasions (e.g. for certain subjects or at certain times) when a pupil attends classes at an ordinary school, but otherwise belongs to a special school. Psychologically experienced integration, finally, forms part of what we have defined as social integration.

As has been shown above, these concepts are in the first instance geared to describing different forms of integration associated with special school facility integration. There is nothing, however, to prevent the terms also being used to describe individual integration (total integration, educational integration) from different viewpoints. By using these terms, we are able to describe in a sophisticated manner various aspects of formal integration (in terms of physical distances and degree of joint utilization of resources). We are then also able to problematize the relation between physical and functional integration on the one hand and social and societal integration on the other hand. And this, as shown by the critique of the integrationist view above, is a matter of particular urgency.

2 PROBLEMS ASSOCIATED WITH SPECIAL SCHOOL FACILITY INTEGRATION

During the seventies, special elementary and training school classes have been integrated into the ordinary school system at a rapid rate. Integration has involved the special school classrooms being located in the same or immediately adjoining ordinary school buildings. Today, more than 90% of special school and approximately 60% of training school classes are integrated on ordinary school premises.

Facility integration, has in the first instance, taken the form of physical integration. To some extent it has also involved the special school and the ordinary school making use of joint resources. Facility integration has been associated with a certain degree of functional integration.

Any more advanced form of functional integration in the form of co-operation at the teaching level has, however, been a relatively rare occurrence. With respect to social integration, there are great variations between different schools but, in general, we may state that no actual social integration has taken place (Söder 1979).

We may therefore say that one of the major problems involved in the integration of the special and the training school is why so little co-operation and social contact has developed from the "base" formed by facility integration.

This is not to say that physical integration and joint utilization of resources is functioning without problems. In the case of physical integration, one might draw attention to the fact that in many "integrated" schools, the special school teaching facilities have a separate location, in their own buildings. Thus, in the autumn term of 1976, 16% of facility-integrated special elementary school classes and 23% of training school classes took place in rooms located in their own separate buildings (Söder 1978). The problems associated with physical integration are also very much related to how the special school fits into local authority school planning. The special school often has problems in renting its way into the local authority schools. The easiest schools to get into are those with a declining pupil population and consequently empty school premises and a need of pupils in order to "save" certain posts. It is not an uncommon situation when the area pupil population is on the increase again, to query whether the special school should retain the premises, as the special school pupils are not geographically linked to the school area. There thus exists a risk of the special school being used as a "buffer" in local authority school planning.

Neither would functional integration in the form of utilization of resources seem to be without problems. A general problem here is one of how to assess and cater for the extra need of resources, quantitatively and qualitatively, which the special school pupils may have. Quantitatively, the problem is often solved by "recalculating" when calculating the quotas on which certain posts are based. Thus, a special school pupil may be counted as four or five ordinary school

pupils in estimating the school nurse quota. A procedure of this type does not, of course, guarantee in itself that the extra resources actually do benefit the mentally retarded pupils. Qualitatively, the question arises as to what requirements the special school has for special qualifications where staff at the ordinary school are to be used. It is common, for instance, for the special school to use the practical subject teachers from the ordinary school. During the autumn term of 1976, this was so at 63% of the facility-integrated schools (Söder op.cit.). Only 14% of these had any form of special training (including short "information courses"). Of those lacking any such training, a majority considered that their work would be facilitated if they had some. Similiar "quality problems" naturally arise for other groups of staff too (e.g. pupil welfare staff) but may also concern the question of premises and teaching material.

The more resources are jointly utilized, the more poignant becomes the question as to what resources, qualitatively and quantitatively, the mentally retarded pupils are to be guaranteed. The question is also complicated by the fact that the special school has a broader statutory total responsibility for its pupils than the ordinary school.

But the major problem associated with facility integration would still seem to be, as mentioned, a question of why this form of integration has produced so little co-operation at the teaching level and social integration.

In the case of co-operation, it is most frequently sporadic and consists in joint activities of "exceptional" nature (e.g. joint end-of-term functions, joint celebration of Saint Lucia day). Thus, during the autumn term of 1976, joint tuition for special and ordinary schools was timetabled at only 7% of the facility-integrated schools (Söder op.cit.). In most cases this amounted to having one or two joint periods of physical education during the week.

Nevertheless, the school staff are consistently favourably disposed towards having fully-fledged co-operation between the two types of schools. From a study of 50 integrated schools, it emerged that approximately 80% of teachers in both the ordinary and the special school were in favour of co-operation in one of the practical subjects.

Even if we must bear in mind that there can be a difference in reporting a favourable attitude on a questionnaire and taking the consequence of this favourable stance in practice, it would seem to be a simplification to blame the low occurrence of co-operation on lack of interest on the part of the teachers.

A contributory fact as to why more co-operation has not developed could be that co-operation of this type has been felt to be a goal of integration to a very minor degree. Instead, the explicit aims there have been have focused on implementing physical integration and co-ordination of certain resources. How facility integration affects the actual educational work within the special school has been discussed surprisingly little. The Special School Curriculum 1973, for example, mentions integration only in connection with utilization of particular resources (library, school health service etc.) at the school. Nothing is said about how integration might be able to affect the actual forms of working in the special school. The idea was that the activities would be moved as they were to ordinary school buildings but that work would continue as previously. Physical integration has been an end in itself.

Naturally, development of co-operation is made more difficult by the fact that the ordinary school seldom works with flexible groups across class boundaries. There is very little such "co-operative tradition" for the special school to fall back on. This situation might possibly be changed if the spirit of the SIA Commission[1)] makes itself felt. Many of the problems discussed in connection with the SIA reform are also common problems in developing co-operation between special schools and ordinary schools (e.g. teacher team-work, suitable premises for collaboration).

As to how social integration looks at the facility-integrated school, it is difficult to make any general assessments. The small-scale studies which have been made (see next section) indicate that there are distinct variations in this respect between different schools. If, nevertheless, we are to attempt to characterise the social relations between special school and ordinary school pupils, they may best be described as "accepting indifference". The mentally retarded pupils are, as a rule, accepted by their peers in the ordinary school. There is virtually never any systematic harassment and bullying. But more

1) See note 2 after list of contents

positive relations are also uncommon. Facility integration has not resulted in any actual social integration.

In this case too, however, the "normal" school environment is in itself poorly suited to social integration of the mentally retarded. Social contact between school pupils is largely along class lines. Contact between school pupils is relatively uncommon and contact between classes at different levels is even more uncommon. The lack of social integration of mentally retarded pupils must be seen in this light.

Another fact making social integration more difficult is that the special school has such large catchment areas. Normal children attend the same school as their friends at home, at least at the primary and middle levels. By and large, the same children mix together at school and in their leisure time. Mentally retarded pupils often have long journeys to school. The non-retarded friends they have at home go to other schools and their friends at school live in the vicinity of the school. This is a fact which also makes socialising between mentally retarded pupils in the same class during their leisure time more difficult.

3 WHAT DOES RESEACH SAY?

A relatively large-scale project to evaluate the integration of the special school and the training school has recently been completed at the Department of Sociology in Uppsala. The project was financed by the National Board of Education with myself as project leader. The description of problems associated with facility integration contained in the previous section is largely based on data derived from this project.

Facility integration of the special school has also been the subject of a number of small-scale studies. These are most frequently special projects carried out at teacher training colleges or dissertations in behavioural science subjects. The scope, quality and the issues raised vary greatly between these different studies.

The attempt I shall make here to summarise these studies is not a reflection of an ambition to include all the studies which have been made. Rather, it is an attempt to pinpoint which problem areas have been investigated.

The studies made have principally focused on three different problems associated with facility integration; co-operation between special school and ordinary school, social relations between special school pupils and ordinary school pupils and the effect of information about mental retardation which is given to the pupils of the parent school.

With regard to co-operation, those of us involved with our project have concentrated on a) investigating the occurrence of co-operation in different forms between the special school and the ordinary school and b) attempting to identify factors in the school environment facilitating/impeding the development of this type of co-operation. The data in these studies is made up of replies to structured questionaires addressed to school staff. The nature of the data is such that the information we have about co-operation is relatively superficial. A number of other studies contain more detailed description of various experiments in co-operation. Åkhagen (1978) has made an in-depth study of co-operation at a small school between a training school class at the middle school level and an ordinary school class at the primary level. The study is principally descriptive and less concerned with evaluation.

More systematically evaluative are the studies reported by Wranne (1974) and Yebio (1976). Wranne's study investigated the effects of parent school pupils receiving information about the special school pupils and of their carrying out a number of assignments in small groups together with special school pupils. The study was arranged as a quasi-experiment with before and after measurement and a control group. The criteria of evaluation were the social contact between the pupil groups and their attitudes to each other. Observation and sociometric questions showed no effect on co-operation whereas it was possible to trace positive changes in attitude in semantic differential and essay plans.

Yebio (op.cit.) evaluated a camp school for two ordinary school classes, one remedial class and one special school class. Attitudes and contact were measured by means of a questionnaire before and after the camp school. Most of the judgements are positive. This applies in particular to the remedial class and special school class pupils. The results, however, also show that the prior attitude of the ordinary school pupils is of great significance. The positive effects on attitude were lowest for those pupils who had a negative initial attitude (p 23). The fact that prior attitude is of great importance to the effects on attitude of contact with mentally retarded pupils at school has also been noted by Skårbrevik (1971), who in a study of two Norwegian schools found that the variation in attitudes was appreciably greater at the integrated school than at the school where no handicapped pupils were integrated.

Some studies have focused on the relations between groups of teachers as a precondition for development of co-operation (Lugn 1973, Ågren 1975). These draw attention to the great importance af good relations between special and parent school teachers if co-operation is to work. Ågren's report describes the starting points of an experiment in co-operation which has subsequently been completed by Ann Herrnsdorf but no final report has yet appeared.

Studies of co-operation concentrate, practically without exception, on effects in terms of changes in attitude and/or changes in the social relations between the groups of pupils. Studies of educational methods and educational effects associated with co-operation of this type are considerably more uncommon. An evaluation of both educational and social aspects is currently being made in the county of Östergötland on the experimental scheme being conducted there with a small number of mentally retarded pupils "fully integrated" into ordinary classes (headed by Olle Wadström).

The social integration, relations and attitudes between special and parent school pupils, have been the subject of a number of studies of varying quality. Often the object has been to describe the social contact between the groups of pupils. The methods vary from soft data

observations and interviews to more hard-data, structured methods of inquiry. The most immediate impression gained from these studies is that the variations between different schools are great. As an example, we might mention that in various studies questions were asked as to how often the ordinary school pupils play with the special school pupils. This question has been put to ordinary school pupils at nine different schools in a manner which renders the results reasonably comparable (Arnell-Gustafsson/Söder 1976; Björsvik et al 1971; Fällman 1978: Johansson 1978). The proportion of ordinary school pupils reporting playing "now and then" or "normally" playing with special school pupils varies at these schools from 7% to 49%. Similar variations emerge when one studies how many report "talking to", "teasing" or "falling out with" the special school pupils.

One also gains the impression of great variation from the studies based on soft data. Fredriksson/Malmkvist (1971) for example, present a relatively favourable picture of the social integration of two schools with integrated training school classes: "The pupils at the ordinary schools have quickly grown accustomed to their new schoolmates. At the beginning of the autumn term, everyone looked at them as if they were exhibits and it was the training school pupils who took the first initiative to contact. It was then noticeable that the ordinary school pupils adopted a rather overprotective, pitying attitude which has now developed into a more normal and everyday tone vis-à-vis the training school pupils. Games initiatives now come from both directions. No training school pupil has been subjected to bullying" (p 11). It may be appropriate to compare this quotation with Wranne's summary of her study referred to above: "The inclination to communicate between the experimental classes, which was non-existent before the structured contact, had not been altered subsequent to this (apart from in the odd exceptional case) in any way other than that pupils greeted each other. Thus, neither two years of integration or organized socialising on five occasions has produced any real contact between the ordinary school pupils and the special school pupils" (Wranne op.cit. p 32).

The fact that the results of these studies would seem to be so different is undoubtedly related to the fact that the intricate pattern of social contact and the attitudes at these schools are difficult to encompass and summarise even when using "soft" methods. The attitudes of ordinary school children towards the mentally retarded pupils, for instance, are rarely one-dimensional and simple to get at. Ferm/Malmström (1972) in their study of ordinary school pupil attitudes to training school children, make the observation that at least three different attitudes are present and reflect three types of social relations. The first is overprotection taking care of and "nursing" the mentally retarded child. Another type of relation which was common was more in the nature of normal relations between friends and a third featured a certain negative element, making fun of and teasing the training school pupils.

Some of the differences in evaluation of the pattern of social contact are undoubtedly also attributable to the different points of departure and expectations held by the authors. There is a tendency to describe the social relations as more positive at schools with an integrated training school than at schools with an integrated special elementary school. The studies concerning integrated training schools (e.g. Björsvik et al op.cit.; Fredriksson/Malmkvist op.cit.;) often have lower expectations of how much social contact can arise and often judge the absence of negative relations as being positive per se. In studies concerned with integrated special elementary schools, it is more common that the expectations of social relations are higher and therefore the judgement is often more negative (as in Wranne op.cit.; Andersson et al 1970 referred to in Ågren op.cit.).

If, despite the distinct variations between schools, one is to say something in general about the pattern of social contact between groups of pupils, one must state that both positive and negative relations are uncommon. Although hard data studies show that a relatively large proportion talk "now and then" to or play with special school pupils, the proportion that has contact of this type with the special school pupils "daily" or "very often" is often very small. Such data is, however, very difficult to interpret.

It says nothing about the quality of the contact and we know nothing about how scattered or concentrated these contacts are among the mentally retarded pupils at the school. Above all, it is difficult to know how common/uncommon contact of this type with special school pupils is in relation to contact in general with pupils from other classes. We know that the bulk of social contact, even outside the direct classroom situation, takes place within the circle of classmates. Data from attitude surveys, however, indicates that preferences with regard to contact are most positive towards pupils' own classmates, less positive towards ordinary school pupils outside of pupils' own classes and least positive of all towards pupils from the special school (Arnell-Gustafsson/Söder op.cit.).

No social integration in the real sense, however, would seem to have been developed at any of the schools studied. Accepting indifference is the dominant pattern.

The third area in which studies of facility integration have been made is that of information to ordinary school pupils in conjunction with integration. These are normally arranged as quasi-experimental studies investigating the effect of special information programmes/ information material. As a rule, the post-enumeration tests have been carried out within a few weeks and it is uncertain as to whether the positive changes in attitude found in some cases are of a more far-reaching and long-term nature.

A study by Tennius (1973) found no clear effects of oral information during a lesson and showing a film about ADL training. The criterion of evaluation in this case was attitudes measured with semantic differential. In a broadly-based experiment designed to influence the attitude of ordinary school pupils to handicapped pupils, Bergvall et al (1974) compared the effect of simulation exercises (e.g. role playing) in situations involving handicapped pupils and information by way of self-instructional material comprising six lessons. The study concerned the handicapped in general and was not primarily bound to the question of facility integration of the mentally retarded. Only marginal effects were found for both methods with regard to changes in attitude, whereas the self-instructional material proved to produce better effects as regards knowledge than

the simulation exercises. Both pupils and teachers, however, felt the simulation exercises to be more stimulating and interesting.

Positive effects of information are also reported in a number of studies. Göransson et al (1976) used special educational material in six ordinary school classes at an integrated school. Follow-up took the form of the pupils making interviews with the special school staff. The effects are judged to be positive. The ordinary school pupils asked interested and informed questions and all the teachers involved also considered the experiment a success. Evaluation did not include a more precise measurement of attitudes.

In a smaller experiment, Hedman (1976) arranged for a class that had displayed negative attitudes to mentally retarded pupils integrated at the school to listen to readings for a number of lessons from a book about a mentally retarded boy. He also arranged group discussions based on materials on developmental psyhology. In the pre- and post-measurements of the attitudes of the pupils he was able to observe distinctly positive effects. He makes the reservation, however, that these may be short-term and superficial in nature.

4 CURRENT RESEARCH NEEDS

In the preceding sections, we have confined ourselves in the main to a discussion of the special school facility integration. Now that we are to say something about current research needs it will be impossible to maintain a limitation of this type. It is important, for instance, not to break off the bit involving schools from the whole integration complex but instead to proceed on the basis of a total approach to the situation of the mentally retarded child. It is also obvious that the variety of questions which may be posed on this subject of integration lead fairly quickly on to questions of a more basic scientific nature. The following review of research needs highlighted in connection with the subject of integration therefore branches out beyond the narrow focus on facility integration.

The studies referred to in the preceeding sections have focused on integration in school. But as integration in school has developed, other changes directly affecting the retarded children have also taken place. When the idea of conducting special school teaching at special boarding schools was abandoned, this also resulted in the development of new forms of residence for pupils. Today a large proportion of special school pupils live in student hostels in ordinary flats scattered among ordinary housing. No research has been conducted into this housing integration. From a number of viewpoints, however, this is just as important as school integration to the total situation of the mentally retarded person. Fundamental questions concerning the motivation and emotional adjustment of the pupil are directly related to his housing situation. Neither can the question of social integration be studied as an isolated school phenomenon. The potential for social relations offered outside the school is just as important; at home and in leisure time. Today we also know very little about the pupil hostel scheme as such; suitable group sizes, group composition, suitable housing areas etc. A systematic evaluation of housing integration, taking into account the relations of living conditions to school and leisure, would therefore seem to be urgently required.

A growing proportion of special school pupils also live in their parents' home. The various studies made of the problems relating to parents have devoted very little attention to family situation in relation to the school. The attitude of the parents toward having their children in an integrated school has been touched on in some of the studies of school integration referred to above, but has not been systematically investigated. The parents' need for relief and child minding also bears directly on how leisure time is arranged for the children. Studies of special school pupils' leisure in relation to their school situation and housing situation are non-existent today.

With respect to both housing integration and leisure, future projects may be stimulated by the studies conducted around these problems relating to mentally retarded adults (Sonnander 1978; Lörelius/Nilsson 1978).

One of the problems we mentioned in the introductory section was the conflict which arises between pure educational goals and the goals of social integration. During the next few years this question will be a highly topical one. More and more parents who have had their children individually integrated into nursery school are questioning the justice of separating the child at the age of seven from friends in the neighbourhood and his nursery school friends by placing him in a special school class. Using social goals as their basis, attending a school near the home together with friends from nursery school, they are questioning the educational need for separate special school classes. It would therefore seem to be an urgent matter for research to attempt to clarify to what extent and in what manner smaller special school classes provide the conditions for successful learning. We know less today about these educational aspects than the patterns of social relations which make up the other side of the coin.

The fact that we today know so relatively little about the importance of different educational arrangements to teaching results and social adjustment is related to gaps in psychological knowledge on a number of points. Basic psychological research conducted in Sweden about mentally retarded people has mainly focused on the development of the intellect (Kylén 1974, 1978) and identity (Liljeroth 1974). We know considerably less about the interaction between a mentally retarded person's perception of reality and emotional life. This means that we are unable to say very much about how mentally retarded people, proceeding from their own feelings and impressions of the world around them, make decisions relevant to action. The mentally retarded person's decision-making thought-processes are in a sense the key to his adjustment to the world around him. For this reason, research around these fundamental issues is of great importance both to education in general and to problems of integration in particular.

Another problem of a fundamental psychological nature highlighted by integration is the mentally retarded person's awareness of his handicap. Through integration, the mentally retarded person is daily confronted with situations which spell out his intellectual handicap.

It seems that today both school and hostel staff often avoid getting to grips with the issues which this raises. Not least of all within the school is it possible to encounter an almost incredible resourcefulness in teachers in avoiding confronting pupils with the fact that they are intellectually handicapped. Naturally, it is no easy question how one integrates an awareness of such a negatively valued deviation with a positive self-concept. A certain amount has been written on this problem area often with the stress on practical application (Allsad/Lundahl 1974; Sommarström 1976; Bakk/Røren 1979). Both basic psychological research into these problems and practical development of materials and methods are urgently required.

In a sense, integration constitutes a confrontation between mentally retarded people and the segregative mechanisms present in the social contexts into which we are endeavouring to introduce them. Nursery school is proceeding with individual integration into normal groups of children. In adult life, the mentally retarded are segregated in the fundamental sense that they have no chance of breaking into the labour market. We tend to accept both of these things. Our attitude to the problems of integration is different at different ages. In a way, the school functions as the social institution which sorts out the mentally retarded for their future adult existence in early retirement. It is at this point that the problems of integration are at their most poignant. On the one hand, we naturally do not wish the measures we take to create or reinforce segregation. On the other hand, we know that mentally retarded people, as adults, find themselves in a societally segregated situation, in which they need all the knowledge and skill they can acquire in order to cope with their adult situation. And the acquisition of this knowledge requires various forms of segregative arrangements during the years at school.

Taking this view, a number of issues of a socio-psychological and sociological nature stand out as areas urgently requiring research. It is important, for example, to investigate how the segregative mechanisms operate in relation to different ages (nursery school - school - adult life). On the subject of integration in the nursery school, a good deal of small-scale studies have been conducted (chiefly psychology degree projects and university thesis,) A systematic review of these with the purpose of listing the problems and pinpointing issues relating to what segregative mechanisms make

themselves felt at these ages is a necessity. As regards the situation of the mentally retarded adult, there is a great need for traditional follow-up studies of former special school pupils.

Within the school there is a large, untouched field of research into how segregation of mentally retarded pupils occurs. These segregative mechanisms constitute both the precondition of integration and its most severe hindrance. Today we know how enrollment in a special school formally occurs. But we know very little about the hidden social mechanisms of selection present in this process. What part is played, for example, by pupils' social background factors, values held by various people involved in the selection process and characteristics of the social environment (the school class) from which segregation takes place? An interesting observation is that the proportion of special school pupils among children in a particular age bracket varies between different county council areas. The division of special school pupils into special elementary and training schools also exhibits similar variation. A closer examination of what these differences are due to would undoubtedly lead straight into some interesting issues as to how special school pupils are recruited and result in interesting confrontation between ideals and reality with respect to the recruitment of special school pupils.

With regard to the further development of facility integration, as we pointed out in a preceding section, the poor development of different forms of co-operation and social integration stands out as the major problem. In terms of practical application, the most urgent task of research would therefore seem to be initiating experiments in co-operation and evaluating them systematically.

An important concern here is to analyse and specify various criteria for an evaluation of this type. In reviewing earlier studies, we saw that the most common criteria to date of the "success" of integration have been social ones (attitudes, contact with ordinary school pupils). In view what we have said about the conflicts between educational and social goals, the relation of integration to the societal integration of the adult and not least of all in view of the inclination to regard the absence of negative relations as "success", there are grounds for querying this focus on superficial social evaluative criteria.

This somewhat unsystematic listing of current research needs may be summarised under three different headings. Firstly, studies of a more investigative character in areas in which we know very little today about the problems which exist (A). The second point (B) takes up some of the more general problems highlighted by integration. As a third point (C), one may summarise where the focus should lie for future direct evaluation of integration. The list is an attempt to systematise the issues discussed above but does not, of course, represent an attempt to establish priorities among the various issues or areas.

A. Problem-charting surveys of

- Housing integration
- The special school pupil's leisure situation
- The parents' situation in relation to the school
- Former special school pupils' situation after school.

B. General problems highlighted by integration

- The decision-making thought processes of the mentally retarded: The interaction between perception of reality and emotional life
- The mentally retarded person's awareness of his handicap
- Differences in the integration/segregation process at different ages (nursery school - school - adult life)
- School segregation - selection mechanisms in recruitment of special school pupils.

C. Evaluation of school integration

- Analysis of different types of evaluative criteria
- The consequences of integration on the teaching situation in the special school
- Action research evaluation of local experiments in co-operation between special school and ordinary schools.

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Part II Hearing impaired children

SCHOOL PLACEMENT OF DEAF AND HARD OF HEARING CHILDREN

What do we know about integration?

Kerstin Nordén
Tore Äng

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Note:

The term 'comprehensive school' is used to denote Swedish 'grundskolan', a blanket term for the years of compulsory schooling (7-16) covering primary, middle and senior levels but excluding the sixth-form college, used here to denote Swedish 'gymnasium'. No contrast with grammar school etc is implied for the purposes of this report.

1 INTEGRATION AND NORMALIZATION

> "When I use a word", said Humpty Dumpty, "it means exactly what I choose it to mean. Neither more, nor less."
>
> "The question is", said Alice, "whether words can have different meanings."
>
> "The question is," said Humpty Dumpty, "who's going to be MASTER, that's all."
>
> (Lewis Carroll: Alice in Wonderland)

School policy in Western Europe and North America is characterized today by an endeavour to eliminate discriminatory categorizations and to reduce the distance between different groups of pupils. All pupils should receive their education within the framework of the ordinary school system and, to the extent that special measures need be applied, these are to be defined in terms of the individual pupil and not on the basis of categorization in a "handicap group". In Sweden, "integration" and "normalization" have been formulated as fundamental, guiding principles of these endeavours In other countries in Western Europe the term "integration" is also used whereas "normalization" is not found outside of Scandinavia. In the USA, the reference is to "mainstreaming" and the right of pupils to education in the "least restrictive environment".

1.1 Integration

With respect to the conceptual analysis of the term integration, we take largely the same view expressed by Mårten Söder in the preceding section. We are in full agreement with his definitions of different forms of integration but we shall also be using the expression "partial integration" to denote the form of functional integration which Söder calls "co-operation" and which signifies membership of a special group but with varying degrees of "activity integration".

We shall discuss the goal of integration in a special section, 1.3, where, in view of the very special situation of the hearing impaired pupils, we shall be using the term "assimilation" - conversion to sameness - in contradistinction to the term integration.

The strong positive overtones acquired by the word integration might be regarded as ensuing from its linguistic origin, which suggests a quality of mutuality. Being integrated means being a part of and, according to Marklund (1977), should result in a qualitatively new state of being in those parts integrated with each other.

The American term "mainstreaming", however, has also acquired positive overtones, which cannot be ascribed in the same way to linguistic meaning. Mainstreaming means quite simply placement "in the main stream" in contrast to "streaming", which denotes some form of grouping by level. The word itself does not imply any qualitative requirements as regards placement.

The explanation behind the strong overtones is probably that proposals for reformist changes are introduced in a manner that conveys to the public the idea that the reform is certain to result in a real improvement (Campbell, 1969).

As Söder points out, the strong overtones create a risk that an official decision of "integrated" placement leads us to believe that, by avoiding a "handicap group" categorization, we are involving an individual pupil in a general social community, disregarding the fact that segregative mechanisms are a part of social reality. Taken in contrast to the term segregation, however, it is fairly obvious that integration must acquire positive overtones.

According to the terms of reference for the Government "Committee of Enquiry into Integration of Handicapped Pupils into the Ordinary School System", the object of integration is to create a normal environment for the handicapped pupils and to provide conditions for social community and understanding between different groups of pupils. But at the same time as we in the school

system today reject separative/segregative measures which represent streaming, we have a consistently implemented system of segregation by age. Although we have begun to discuss whether mixed age-groups would be more advantageous - and experiments with sibling groups are taking place to a limited extent - no proposal has as yet been raised that teaching groups should be composed of pupils of all ages. Is this going too far? If so, why?

Liljeström (1975) observes how the redistribution of functions in contemporary society has led to the exclusion of children from the vocational and social activities of adults. And the ordinary school is still an institution cut off from society at large, even if we can now discern an orientation towards greater participation in the activities of community at large. In society in general, we have a distinct segregation by age and function, in which non-productive age-groups are segregated from involvment in active, socially useful functions.

If one wishes to counteract segregative mechanisms within the school system, one must also pay attention to the problems of the "ordinary" pupils. Large groups of pupils are segregated from social contacts with adults. Will they be able to show consideration for and offer group membership to "different" children when they perhaps have problems themselves in attaining any form of group membership? Corrigan (op.cit. Barton, 1977:20) points out that ... "responsible mainstreaming of hearing-impaired children is going to have to be done in the context of reformning the total system". This change would seem to be the ultimate objective of the SIA reform[1)] but attainment of the goal would seem to be far off. "One can say very little about

---

[1)] SIA is short for "skolans inre arbete" which means "the internal organization of school activities". The goal of the SIA reform is to create a more stimulating school environment. In order to meet the needs of different pupils better, particularly the "exceptional" pupil, SIA recommends a more flexible organization of groupings of pupils, teamworking staff, and more opportunities for contact with organizations and activities in society at large.

the concept integration, apart from the fact that it is an ideal rather like the notion of equality, something that may never be attained to the degree that one would wish for, but something that represents a challenge". (Quinn, 1978:4).

1.2 Normalization

The concept "normal" is often used in everyday parlance in a variety of meanings. Often it is rooted in the statistical concept of normal, i.e. the most common. But mostly, the concept "normal" is used in contrast to some form of negative deviation, a defect or a deficient condition. Normality is hardly used in contrast to deviations with positive overtones. The shifting meanings of the concept "normal" also apply to the word normalization. Unfortunately, in normal usage it often acquires the sense of normalization of a handicapped individual and, in the international literature the word "normalization" is sometimes used in direct allusion to an individual who is presumed to become normalized. If the term "normalization" is to be used, then the whole expression "normalization of the environment" (integration committee definition) will have to be employed.

The Swedish term "normalization" - in the sense of "normalization of the environment" - can be interpreted in different ways. Either as a change in the total societal environment to make all social functions, as far as possible available to individuals affected by an impediment of a particular function, or in the sense of special equipment in a more protected environment in order to create optimal environmental conditions.

Thimm (1978) wants to introduce the concept quality of life (Lebensqualität) as a guiding principle of integration and in connection with this discusses "das skandinavische Normalisierungsprinzip", which admittedly provides a basis for a pragmatic approach but does not solve the problem of balance between subjective (satisfaction of the individual) and objective criteria relating to the situation of the individual.

Equating "normalization" with "optimal environment" and the American term "least restrictive environment", the logical

application of the principle should be a careful weighing of the conditions of each individual case. In the USA, however, one finds how state education authorities have issued guidelines, in which the special school is given as "most restrictive" and the ordinary class in the state school system as "least restrictive".

"The fact of the matter is that there is no research to demonstrate that one type of educational placement is less restrictive than others. All types are needed, but all must be of high quality ... the 'least' may indeed be the 'most' restrictive, perhaps to an even greater extent than poor quality special educational programs." (Cruickshank, 1977:5).

The same tendency towards a predetermined evaluation of the principle of normalization, without regard for the individual pupil's special needs, is sometimes to be encountered in the Swedish context. For a hearing impaired pupil, however, placement in an ordinary class in the ordinary school could be a considerably more restrictive environment than the school for the deaf or the class for the hard of hearing.

1.3 Educational goals

Magne (1976) takes up the discussion around the subject of whether integration during school years should be the end or the means and finds that the East European countries have predominantly segregated education with an ultimate societal integration as the goal whereas in this country, in the rest of Western Europe and in the USA, integration during school years seems to be seen as a means of achieving societal integration. Bishop (1977) points to the lack of clarity prevalent with respect to educational goals. In the USA he finds a strong tendency to regard school integration as an end in itself, rather than as a means to achieve integration in the long term and he emphasizes that a clearly defined goal is of critical importance for making evaluations.

In the case of pupils with profound and severe hearing losses, the integration debate is influenced by the debate revolving around modality of communication and teaching methods/teaching goals. Even within the school system for the deaf in most countries, we find conflict between advocates of oral methods and manual methods (finger spelling, sign language, signed language). Advocates of manual methods do not wish to exclude oral language, but wish to exploit all forms of communication - "total" communication - in order to stimulate language development and social interaction.

Integration has often been equated with oral methods and segregated education with manual, whereas in fact there are examples of completely orally-orientated segregated special schools, along with instances of integration programmes, in which manual communication is systematically employed. With regard to advocates of a purely oral method, we must see their goal as assimilation of the hearing impaired into the hearing environment. Assimilation denotes conversion to sameness. The advocate of a purely oral method wants to make his pupils as similar to hearing individuals as possible. But since these pupils can never become hearing individuals, they are compelled to live "as if" they could hear. This could mean that they are instilled with the idea that they are not good enough, that there is something wrong with them. They are not allowed to be what they are, they must deny a part of themselves. Anyone who has to pretend to be something other than he is, runs the risk of becoming a "marginal person", i.e. someone with no real sense of being at home or belonging to any group.

Integration of pupils with profound/severe hearing loss entails that the hearing environment affords them the opportunity of developing self-respect and independence as hearing impaired individuals. In our view, the debate on teaching methods reflects deeper underlying values which relate to whatever view of people we have. Respect for the hearing impaired pupils as individuals with the right to personal integrity and identity entails respecting their choice of communication modality, affording them the opportunity to choose. We must give them a chance to develop

into competent hearing impaired members of a democratic society, instead of forcing them into a role as "failed hearing individuals". Charrow (1975) observes that given the heavy pressure to assimilate to which the deaf have been subjected, the explanation as to why it has not been possible to suppress sign language must be that sign language communication is the sole chance of real communication to many deaf people. As a general long-term goal in matters relating to school placement, we should like to set up Thimms' (1978) concept "quality of life", which we do not want to see only as a (passive) satisfaction with one's own situation, but also as a feeling of being needed, having a personal value and a function as a member of society. The ordinary school system and the schools for the deaf in the Swedish school system have the same overall goals. The curriculum emphasizes the role of the school for the pupils' personality development with a view to social independence at an adult age. Social independence with the ability to maintain oneself at an adult age has been the rule for pupils from schools for the deaf, even if their choice of occupation has been limited. Societal integration in the sense of being part of and belonging to hearing groups outside of the family has, however, not been realized in the majority of cases. This has not necessarily been the result of a segregated educational situation. It is not a rare occurrence for former integrated pupils to turn to deaf groups, obviously because they find a sense of group-belonging there, which they lacked in the hearing environment.

1.4 Example of policy and programmes

Special legislation on the right of all children to education within the ordinary school system is found in a considerable number of countries - including Denmark, Norway, England, France, Italy and the USA. Examples of detailed programmes to implement integration of the hearing impaired within the ordinary school system are above all to be found in the USA. This is a natural consequence of the framing of American law (Public Law 94-142), where the possibility of a state receiving federal subsidy for

mainstreaming is contingent on the state drafting action programmes. Local school authorities are responsible for implementing the programmes and must draw up individualized educational programmes, which must be revised each year. Volta Review gives a descriptive summary in the September 1977 issue.

Birch (1975) gives an account of a number of programmes and also gives detailed descriptions of standards necessary for a meaningful integration. Nix (1977) presents a list of essential conditions for successful integration. There is no question of mainstreaming all hearing impaired pupils. "... the question is not whether integrative experiences can be established but for whom, under what conditions, and at what cost ..." (Macklin, 1976:365), Regardless of the form of the teaching programmes, we find requirements that pupils to be integrated must have a well developed oral language, be at least of normal intelligence and have parents who can provide them with active support (Reich et al, 1977). In the above-mentioned references, assimilation is the goal of enrollment in the ordinary school system.

Vernon (1976) describes another type of programme - the Holcomb plan - employed in Delaware where the goal is integration. Every deaf child placed in an ordinary class is accompanied by an interpreter - an assistant teacher, familiar with sign language - who also teaches the hearing children and encourages them to learn sign language.

In England, the law (Section 10 of the Education Act 1976) has not yet been brought into operation, as the Government is awaiting the Warnock Committee Report (1978), which contains directives as to how the new Act should be applied in practice. Peter (1978) is doubtful whether Section 10 should be implemented at all in its present form. An amendment of the Act would be the natural consequence of the Warnock Report.

Wilson (1978) stresses how valuable it is that the Committee has drawn up definite guidelines which should guarantee that the new Act is enforced "... only after adequate preparation to ensure that pupils can be educated in ordinary schools without losing

the benefits of special education. ... There is a firm warning to the Department of Education and Science that comprehensive guidance to local education authorities should be issued before Section 10 comes into force". The Committee gives directives as to what conditions must be satisfied in order to conduct successful teaching and emphasizes the neccessity of "recognition of emotional needs, which might include the opportunity of belonging to a small group or having the companionship of children with similar difficulties" (Wilson, 1978:14, 15).

The Warnock Report also contains recommendations for greater opportunities for "people with disabilities" to train as teachers and to obtain teaching posts both in special schools and ordinary schools.

The Committee recommends special schools to be used as resource centres for teachers of integrated pupils. An organisation of this type already exists in Denmark, where "Børnehøreinstitut"[1] and "Døveskolernes Pedagogiske Vejledning"[2] etc are operating as support services for pupils and teachers involved in integration schemes (Skov Jørgensen, 1978).

Löwe (1977) observes that there are few examples of integration in German-speaking countries and goes on to describe three basic policy programmes.

"Regular mainstreaming involves placing of a hearing impaired child in a regular classroom for all or for part of a school day. The hearing impaired child receives some support and assistance from the mainstream specialist who is in most cases an itinerant teacher of deaf children.

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1) Institute for diagnosis and preschool education of hearing impaired children

2) Educational counselling services supplied by schools for the deaf

Cross mainstreaming means that one or more hearing impaired children are placed into a regular classroom and one or more hearing children are incorporated into the group of children remaining with the teacher of the hearing impaired children. Cross mainstreaming provides small groups instruction for those hearing impaired pupils capable of handling a mainstream situation.

Reverse mainstreaming means that normal hearing children are enrolled for all or for part of the day in a class for hearing impaired children. It provides normal speech, language, and behaviour models for hearing impaired pupils who would otherwise be in a self-contained classroom for hearing impaired children.... When placing hearing children into a classroom for hearing impaired children, more than one hearing child should be assigned to the special classroom. At Unterentfelden this recommendation is observed for the following two reasons:

1. The hearing child needs other hearing children to interact with in the classroom as well as in out-of-school activities.

2. It is necessary to provide a larger number of hearing peers for hearing impaired children to model." (Löwe, 1977:103, 105)

In Sweden, the SIA decision (see footnote on p 3) may be regarded as a policy directive but in this country we lack examples of actual programmes or experiments using different resources and follow-up. More often than not reports describe situations as they have developed within the existing framework.

In accordance with the law and the curriculum, the ordinary Swedish school system has enrollment of the hearing impaired either in the ordinary classroom or in a special class for the hard of hearing. In addition to this, deaf school classes also are found at ordinary schools. Sixth-form education is based on integration in some form for special school pupils - education being centralised in Örebro - principally "facility integration"[1]. Other hearing impaired pupils can choose between

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[1] See note after list of contents

individual integration or the facility-integrated sixth-form course of studies in Stockholm, at the Alvik School. The options at the Alvik School, however, have been so limited that many pupils have had no other choice than individual integration.

At the samt time, it must be pointed out that we in Sweden already have a wide-ranging policy of integration[1]. Pupils in Swedish schools for the deaf have long been extremely well screened in relation to the degree of hearing loss compared with a substantial number of schools for the deaf in the USA, for instance. To some extent, a change in the present situation in Sweden can be sensed due to the fact that a number of parents prefer to place children with less profound hearing loss in the school for the deaf because they feel that their children will need to belong to a peer group using manual communication.

2 MAJOR PROBLEMS OF THE HEARING IMPAIRED GROUP

Since the term "hearing impaired" encompasses vastly different categories of hearing loss, from such a mild loss that placement in an ordinary class is the rule, to severe hearing loss and deafness with the absence of functional hearing even with a hearing aid, it is necessary to define different sub-groups among the hearing impaired.

2.1 Definition of different categories

A common criterion with respect to the degree of hearing impairment is the audiogram. An audiogram fulfils an important function in establishing that an individual is hearing impaired but this does not mean that the audiogram is a good indicator of hearing function within a group of hearing impaired individuals, especially not if an average audiometric value is used as the reference in describing hearing loss. A classification of audiograms according to threshold areas would seem to provide more accurate information but still pure tone audiograms do supply unreliable

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[1] Hammarstedt (1979) shows in a survey of all pupils equipped with hearing aids in school years 1-9 in Sweden that more than 50 % are enrolled in ordinary classes.

information with respect to powers of speech sound discrimination. Martony (1975) reports that great variations are to be found in the discriminatory powers of a number of hearing impaired individuals with equivalent audiograms.

One may wonder whether a lack of concurrence between audiogram values and ability to discriminate speech sounds may be explained in a number of cases by the fact that a child has utilizable residual hearing in the left ear only. A large number of studies made in recent years[1)] demonstrate differences in sound perception between both ears with the right ear having better speech sound perception. A preference for the right ear has been demonstrated already at the age of three months (Glanville et al, 1977). We have not found any reference, however, relating this phenomenon to language perception in the hearing impaired.

In attempting to draw a line between the "deaf" and the "hard of hearing", the degree of linguistic handicap in a hearing environment is often used as the criterion.

The hard of hearing. The term hard of hearing is normally used to denote individuals who have been able to develop speech and language with the aid of hearing but are dependent on technical appliances and favourable external circumstances to be able to utilize their residual hearing. Also normally classified in this group are individuals - without usable residual hearing - who have sustained a severe/profound hearing impairment later in life, after the period of language development.

The deaf. Those individuals normally designated deaf in the real sense are "prelingually" deaf. Individuals belonging to this group have a congenital hearing impairment or one acquired in the early stages of development with such a profound hearing loss that the development of speech and language is impeded even using a hearing aid. These children's language must develop with the aid of vision and they are dependent on manual communication.

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1) Kimura, 1967; Nagafuchi, 1970; Knox & Kimura, 1970; Bever, 1971; Morse, 1972; Hiscock & Kinsbourne, 1977.

Among hard of hearing teenagers and adults, it is not entirely uncommon that an individual chooses to associate with a group that uses manual communication in social interactions. These hard of hearing individuals are demonstrating by their choice of group membership that they consider themselves members of the deaf population. It would be reasonable to afford children the opportunity of choosing group membership too.

2.2 Communication disorder

Hearing impairment is always a handicap in social interactions with a hearing environment, since we base our social dealings to an overwhelming extent on conversation, in which the spoken language presupposes a continuous interpretation of auditory stimuli. Anyone with a mild-moderate hearing impairment or a good lip reading ability and/or an exeptional ability to utilize his residual hearing is able to cope well in oral communication with one or two people at a time, but is severely handicapped in a larger group. The hearing impaired person is affected by what is referred to as "social deafness" and is excluded from the group conversation.

A hard of hearing pupil in an ordinary class finds himself in a situation which creates social deafness. Johansson (1976) states that the socially desirable integration is a technical impossibility for hard of hearing children. We cannot on account of noise offer the hard of hearing child an adequate part in communication via hearing aids in an environment such as the ordinary class.

One might wonder how it comes about that we subject hard of hearing pupils to this and why the pupils put up with it. This is partly accounted for by excessive faith in the technical equipment and incomplete knowledge about what sound impressions are conveyed to the hard of hearing pupil via the hearing aid (Risberg, 1978). The decision-making authorities' lack of understanding what a hearing impairment entails is a contributory factor.

But why do the pupils put up with their situation? In order to comprehend this, one must try to understand the influence to which a hearing impaired person in a hearing environment is subjected. There is an implicit suggestion in their upbringing, education, and in corrective measures to be like a hearing person, which is tantamount to a disparagement of being hearing impaired. An individual can put up with quite a lot to obtain the benefit of "status group" membership, even if this is only marginal. Furthermore, the majority know of nothing else. They have no experience of other alternatives. If you have nothing to compare with, you put up with your situation.

The fact that the hearing environment is misled into believing that everything is all right is related to the fact that the hearing impaired rarely complain as much as they should have cause to. Also they have become masters in pretending to understand, even when they do not comprehend a situation. A hearing impaired person in our society is subjected to continuous pressure to "pass of" as a hearing person. In addition to this no one with impaired hearing is able to know what it is he does not perceive (Nordén, 1973).

The situation of pupils in special classes for the hard of hearing is in many respects easier. They are placed by themselves in a small group and are not subjected to the same degree of noise as placement in an ordinary class usually entails. They are also able to feel more secure in being members of a group of equal peers. But, as teaching is normally based on oral communication and they rarely have - or are allowed - the opportunity of learning sign language, communication problems in their mutual dealings are sometimes observed.

It can be more difficult for two hearing impaired indivuduals to understand each other than to understand a hearing person if one requires their communicating through speech. Since pupils in special classes for the hard of hearing most frequently have severe hearing impairments, this also means that they frequently have poor pronounciation and less distinct articulation. In special classes for the hard of hearing, a private

signal system of homemade signs may evolve in order to facilitate understanding.

But a private signal system of this type does not function outside the group. These hearing impaired individuals are unable to communicate whith groups who use sign language and, among normal hearing people, they are virtually always the social underdogs. By insisting on purely oral communication, one runs the risk of restricting their opportunities for social contact. Considering the social and emotional development of the pupils, it would be justified to use "total" communication using auxiliary signs to facilitate their dealings with each other and with other hearing impaired groups.

Since there is no centrally organised sixth-form college with any variety of course options other than those for special school pupils, individual integration is often the only alternative open to pupils in special classes for the hard of hearing. Many pupils from these special classes then find themselves in a difficult educational situation. Placed alone in an ordinary class they may experience real isolation.

Deaf pupils who have had the opportunity of learning sign language are in a unique position, since they are able to communicate freely among themselves. They have a communication handicap in hearing groups but not in the company of each other. This means that their handicap to a large extent is a function of environmental conditions. With respect to school placement of these pupils, one must seriously consider what environment will in the long term be the most restrictive. The communication difficulties of the non-hearing among the hearing can result in social isolation, thereby restricting their personality development. Deaf children should be granted opportunities to socialize both with deaf and hearing groups. In order to provide them with identification objects, making a realistic identification possible, deaf children also need opportunities to associate with deaf adults. We must not overlook the fact that they need adult models which they may resemble. This is one of the reasons behind the

demand which is being put forward by the organization of the deaf and some parents groups, viz. to enable deaf people to take part in the education of deaf children.

We have endeavoured here to give a general picture of the problems of various hearing impaired groups. It would take us too far away from our present purpose to attempt to describe the difficulties of deaf children with additional complications of various kinds. There is, however, a group with very special problems which so far have hardly attracted attention - immigrant children. In teaching these children, one encounters tremendously complex problems. Which language should be used as a basis for communication? Will the family be staying in Sweden or returning home? Should one concentrate on furnishing them with the ability to communicate whith their Swedish peers or should attempts primarily be concentrated on communication within their own family and linguistic group? Which is best for their long-term adjustment? Moreover, the children represent a great many different language groups and how are we to find native language teachers for them? If the child is deaf or severely hearing impaired and needs sign language, where does one find someone who is proficient in the native sign language - if indeed there is one? And how does one cope with assessment, information and advice to the parents?

The problems of the hearing impaired immigrant children would seem to be virtually insurmountable and many of these children face a life in social isolation, deprived of any group membership. Ström (1977) has discussed this problem in a paper, describing cases from Stockholm - one of the places where a substantial number of immigrants are living. In other parts of the country where only a few immigrants with the same background are found in the same place, the problems must be even more difficult.

3 PSYCHOLOGICAL IMPLICATIONS

Earlier in this paper (p 5) we touched upon the debate concerning teaching methods for the deaf and the severely hearing impaired. We also mentioned how divergent positions in this debate influence notions of integration and educational goals. Presenting something of the background to this debate, we attempt to clarify which approach coincides in the best way with fundamental ideas of present-day developmental psychology. Therefore we will give a short introductory description of general conceptions in child development theory and on the bases of this description present some views on the situation of the hearing impaired child.

3.1 General conception of child development - development through interaction

Children develop in interaction with their surroundings - their physical and social environment. The developing child is active - exploring and experimenting with things and with people. In his interaction with the environment, he must be allowed to investigate in action, to ask questions and have opportunities of expressing himself. This exploring activities will provide the basis for the "construction of meaning". Every child has to "construct"his own conception of reality.

In an environment allowing adequate interaction, the child undergoes a positive development resulting in a gradually increasing understanding of phenomena in the environment and discovery of meaningful relations. The child contributes to this continuous process of interaction with the environment through his own "stimulus value" which affects the reactions elicited from the environment.

In this interaction with things and people the child also gradually discovers himself. One discovers who one is oneself through one's relations with the world around. Only in relations with other people is it possible to become "someone" - to acquire an identity. And "whom" one becomes in one's own eyes is a function

of the interaction with people in the environment and how one perceives their view of oneself. A positive development in interaction with the environment leads to a reality adjustment, in which one finds a place - and respect - for oneself as a person and in which one is also able to show respect for other people and have consideration for them.

This conception of children's development/learning is shared by representatives of both cognitive and psychodynamic theories and may be said to be the more or less officially accepted view in this country today, such as it finds expression in the Committee of Enquiry into Child Care Facilities and the SIA recommendations (see p 3). Children are no longer conceived of as passive recipients of impressions from the environment.

3.2 The situation of hearing impaired children

The majority of deaf and severly hearing impaired children grow up in a hearing family, in which auditory signals play a crucial role in social interaction. In the earliest stages of development, adequate interaction should be possible. Communication with an infant child is not based on spoken language, even if, in dealing with the child, utterances accompany the adult's actions. Recent research into children's language, however, has demonstrated that hearing children react at a very early stage to the utterances of the adult (Söderbergh, 1979). We do not know whether a lack or reduction/distortion of hearing and speech stimulation from the infant stage can have effects on the development of the child. It is conceivable that the child acquires a different stimulus value for the parent. In any case, this becomes discernible, when the child reaches the age at which children with normal hearing start to talk.

A hearing child's responses to the speech of the parent stimulates the latter to talk more to the child. In interacting with a child it is therefore essential to use linguistic signals which elicit responses from the child and stimulate the parent to intensify the interaction. In order to ensure positive interaction between child and parent, it is important to use a commu-

nication modality which gives the child as positive a stimulus value as possible. Early stimulation of communication by using signs at the same time as talking should be the best method from a developmental psychology viewpoint. "Gesture and sign language should be used from an early age with any child who seems to have a delay in receptive or spoken language." (Apley, 1978:229). It is of vital importance that in this way the child is afforded the opportunity of expressing himself. A child who does not possess adequate means of expression runs the risk of becoming apathetic or aggressive.

Unfortunately signs are not the hearing parent's spontaneous means of communication. Expressing oneself in gestures does not come easy to all people. Parents need early guidance and stimulation helping them to use all means of expression - total communication.

Bruner (1975) sees language as a "specialized and conventionalized extension of cooperative action". In an environment using language in a modality which is readily accessible to the child, and where social contact is based on meaningful communication, the child learns spontaneously to use this special extension of social interaction. "It is the infant's success in achieving joint action (or the mother's success for that matter) that virtually leads him into language." (Bruner, 1975:6). Söderbergh (1975) points out that not only does the adult provide the linguistic material from which the child builds his own language - it is also on the adult that the child tests his linguistic model. And it is of the utmost importance that the adult understands the child. If the adult fails in this respect, no communication can take place and the child is inhibited in his linguistic development.

In the case of a child with no functional residual hearing, language must be developed through visual perception. In a hearing environment, linguistic communication is based on auditory stimuli, giving a deaf child no basis for spontaneous

language acquisition. This creates problems both for the child and the hearing environment (Nordén, 1977) and produces a "communication barrier" (Schlesinger & Meadow, 1972) with resultant breakdowns in social interaction. Language, according to the contemporary view of language development, is however, at the same time, a function of social interaction. Prelingual activities in interaction with the physical and social environment give the child opportunities of concept formation and of construction of meaningful relations, which is a prerequisite not only for language development but also for a positive development in general (Piaget, 1967, 1971; Luria, 1975; Bruner, 1975). Interference with the spontaneous process of language acquisition involves the risk of linguistic disorders (Moskowitz, 1978). "Attempts to interfere with the normal acquisition process in children by direct teaching have proved notoriously unsuccessful; we cannot it seems usurp the child's own role in language development. Unfortunately, this is precisely what has been attempted in the case of the deaf child". (Brennan, 1975:463).

The traditional way of teaching deaf and hard of hearing children has been influenced by behaviourist notions which have equated speech with language and language with thinking. This is why efforts have been concentrated on teaching children spoken language. As it is tremendously difficult to learn to speak when one cannot hear one's own voice, there are extremely few children with severe-profound hearing loss who acquire a well-developed and intelligible spoken language. When children without functional hearing visually have to interpret signals intended for auditory perception, the process of language acquisition is impeded and made unneccessarily difficult.

Irrespective of the fact that language "training" during the period of language acquisition interferes with the child's spontaneous process of language construction, the social interaction with the environment is also affected. In a hearing environment anyone who cannot perceive or has difficulty in perceiving auditory impressions, will have a different stimulus value from the hearing person. And an environment

which bases its social interaction on auditory signals will influence the hearing impaired person in a manner which changes/diminishes the stimulation for social interaction. A normalization of the environment for individuals with a severe-profound hearing loss entails the environment using visual signals which can be comprehended by the hearing impaired person and thereby stimulate social interaction.

Children with functional residual hearing do have the potential to apprehend auditory stimuli and with the aid of technical equipment, they are able to hear their own voice. But we know nothing about what auditory impressions the hearing impaired receive via their hearing aids (Risberg, 1978) and we know very little about what it means to be constantly subjected to noise - which is always present in a normal environment and can be amplified in a very unpleasant way in a hearing aid.

In experiments with hearing individuals, it has been found that when masking auditory impressions - by means of noise - meaningful material is easier to apprehend and interpret (Neisser, 1976). This seems to be fairly self-evident. In other words, it is a question of improving the meaningful content of auditory impressions by every means available. In the light of this, it is difficult to understand the negative attitude to the use of signs and "total" communication which is still to be found in certain quarters. The important thing is to make linguistic expressions - in all forms - readily accessible and meaningful to the child.

The fear that using signs would impede the child's learning to speak is today regarded as unfounded. This notion has no basis in factual data and there is much to indicate that "total" communication is, on the contrary, the best way to spoken language for many children. A study of preschool children (Nordén, et al., 1979) has reported how children who were previously without language began to utilize their residual hearing when the use of signs was introduced and after a period of early reading began to speak spontaneously.

Speech cannot and must not be the goal overshadowing everything else. Communication is of primary importance. Breakdowns in communication make many events taking place in the environment incomprehensible to the child, hampering his construction of meaning. The lack of meaningful relations impedes a constructive adjustment to reality and is the real threat to positive development. With regard to the image the child acquires of himself it is of utmost importance that he does not learn "to be socially isolated".

When observing the social interaction in a group of children including a hearing impaired child one sometimes sees how conflicts arise because communication is not functioning. It happens that the hearing impaired child does not understand or misunderstands the signals coming from the people around him. The child does not then react appropriately and the people around him do not understand the child's reaction. Social interaction is very sensitive to feedback of appropriate signals and breakdowns in social interaction occur above all when we think that we understand each other but do not. In the case of a hearing impaired child, there exists a risk that essential elements of social interaction, which is such an important ingredient in development, are distorted.

Sometimes the breakdowns in social interaction result in open conflict and aggressiveness, sometimes the child will become passive and withdrawn. Here, one must be careful not to interpret the child's behaviour merely as a sign of emotional disturbance. The underlying cause - the communication problem - must be tackled. At the school for the deaf in Lund children have been admitted who, after earlier placement in hearing preschool groups, at the age of 7, had no language. They had apparently lacked adequate stimulation and showed severe behavioural disorders. These gradually straightened out, however, when the children received all forms of language stimulation and learned to communicate.

Thorough evaluation and guidance prior to each placement decision, combined with follow up of the child's situation must be conducted with all hearing impaired children. The essential thing should be to determine which children would be better off in an integrated school situation, what conditions are required for successful integration and what factors create problems. We must by every means prevent maltreatment of children. 60

3.3 Effects of school placement

In reviewing the literature on integration programmes in different countries, one finds a good many reports giving accounts of planning programmes, but very few dealing with evaluation and the effects of programmes. Keogh & Levitt (1976) find that:

"Despite the popularity of the concept and the legal, philosophical and social support for mainstreaming, review of available information on the topic yields more rhetoric than evidence ... emphasis to date has been on administrative arrangements more than on instructional or curricular matters ... from our ongoing contacts with public school personnel, it is apparent that the closer one is to the actual operation of programs, the less certainty there is about mainstreaming." (Keogh & Levitt, 1976:3, 8).

One also finds a strongly critical attitude to the evaluations which have been made (Bishop, 1977; Jones, 1976; Scriven, 1976). Critical reports of mainstreaming are coming out of the USA calling for a complete change in planning of school staff training, arrangement of teaching, technical equipment, and definition of different categories of hearing impairments (Brill, 1975; Davis, 1977; Vernon, 1970, 1976). Detailed requirements for preparatory measures in these respects are also presented in The Warnock Report (1978).

Bertness (1976) describes the mainstream movement in Tacoma, USA where all handicapped pupils have been integrated into the ordinary school system in a very flexible organization with various levels of "progressive inclusion". "Progressive inclusion" signifies any form of "cooperation" between the system of special education and the ordinary system, ranging from visits to a special group by ordinary pupils to placement in an ordinary class of a special pupil. But this is founded

on a system whereby for a number of years, school staff have been hand-picked by the local authority so as to be sure of obtaining suitable teachers who are involved and willing to work in the manner required. No data are given showing the effects on the special pupils.

A fundamental difficulty in interpreting reported data is the blurred definition of the degree of hearing loss. Sometimes there is no information whether a report is concerned with the prelingually deaf or pupils with milder or later in life acquired hearing loss. One is rarely informed whether a comparative group of deaf school pupils has been educated through purely oral/aural or through "total" communication.

Evaluative criteria vary tremendously and range from academic achievement or level of language development to attempts to measure social interaction or self-concept ... "Of all the comparative studies which have been done, including those on mentally retarded children, none have found integration to have any negative effects on academic achievement. However, negative effects on personal development are scattered throughout the literature." (Reich, Hambleton & Houldin, 1977:542).

Craig, Salem and Craig (1976) report on data deriving from a review of mainstreaming and "partial integration", i.e. placement in the pupil's own group with access to joint instruction and/or social intercourse with ordinary school pupils. The most common evaluative criterion has been academic skills, followed by communication skills, after which come social skills and interaction and, for a small number, vocational skills. Studies designated "formal research" had only been conducted for a small group of pupils.

Dale (1978) describes the results of enrollment in ordinary classes in schools in London and uses only reading age and speech as his criteria. He also presents some data from a

number of different countries and writes as follows: "In the educational authority area of Linköping in Sweden, an individual integration scheme has been so successful that in the past ten years only 7 of 117 children (6 %) have had to go away to special schools or classes for deaf or partially hearing children." We cannot find that these figures are true to the facts. At the present time, eleven pupils from families living in this area are attending schools for the deaf in this country. In addition to this, parents with severely hearing impaired children (24 children) have moved from the Linköping area and placed their children in schools for the deaf or classes for the hard of hearing - 7 of the children during the pre-school period and 17 of the children at a later stage.

A number of examples are to be found of descriptions of individual cases. Coleman et. al. (1975) reports on an educational programme and a follow-up on a pupil attending an ordinary class. The chief interest of the report is that it presents an example of a systematic evaluation conducted by the teaching staff involved.

The view of the hearing impaired of their own integrated situation is presented in Auris (1978) among others. Lindén (1972) gives a detailed and very instructive description of his schooldays and his adult situation. "To be hard of hearing and integrated in the normal school system is in my experience a very strenuous occupation." (Lindén, 1972:101).

Accounts of programmes for and/or the effects of partial integration, i.e. the opportunity of mixing whith both hearing impaired and hearing pupils, are presented in a number of reports. Périer (1972) describes the integrated school in Brussels, which at that time had 8 classes of hearing impaired pupils in a hearing school. The school did not admit underachieving pupils. It was, in other worlds, a select body of hearing im-

paired pupils. The goal of the school was to afford each child optimal social integration and at the same time, to ensure that the need for special education was satisfied. A number of pupils were integrated in ordinary classes, others were taught in special classes, which were jointly taught with hearing pupils for certain activities. Périer stresses the importance of giving the pupils options and the opportunity to retire into the company of their own group in which many of them feel that they can relax and are under less pressure than they are among hearing pupils.

Ross (1978) takes up the same ideas, that is, to have the children's behaviour and choice of group membership determine their placement. Ross describes integration of pre-school children, who were placed in groups among hearing children. He rejects the integration of children who find it difficult to communicate whith their hearing peers. "... full mainstreaming of such a child from the nursery into the kindergarten would have deleterious psychosocial effects" (Ross, 1978:25).

Partial integration as an alternative having positive effects is described in other reports. Strang et. al. (1978) reports a more positive self-concept among the partially integrated than in other groups. Their study, however, concerned "academically handicapped children" and the results cannot therefore be directly applied to the hearing impaired.

From Israel, which has a well-established system for integration and where purely oral communication is employed in all forms of school, Sarfaty & Katz (1978) describe a comparison of self-concept in three groups of hearing impaired pupils (14-15 years old) - individually integrated, group integrated and special school pupils. Since a verbal questionnaire was used, the study only comprised pupils with sufficiently good linguistic ability to understand the questions. According to the authors, the results do not provide a sound basis on which to interpret differences which could be ascribed to differences in school placement, but to the extent that differences were found, the group-integrated pupils were best adjusted.

Vernon (1976) is severely critical of all forms of school placement for deaf children, in which education is based on purely oral communication. His criticism also extends to partial integration. From the individual integration programme, based on "total" communication established in Delaware, he reports considerably more social interaction between the deaf and the hearing pupils than he had seen in any other context. When social interaction between the deaf and the hearing is based on total communication, both parties must meet each other halfway - and this he would see as the distinctive feature of real integration. The hearing pupils must learn to use signs and finger spelling, the deaf must try to talk and lip read. He does not believe that a complete integration of deaf and hearing groups is possible - there will always be communication problems to some extent - but he is of the opinion that the integration programme implemented in Delaware enlarges the potential for social interaction.

Salle & Ptasnik (1976) describe an integration programme for teenagers (high-school). The programme covered 48 hearing impaired pupils without more specific description. The programme evolved in stages and the way in which it evolved also illustrates how the effects were evaluated. After a number of years at the school, a club for manual communication was set up for the hearing impaired pupils. Total communication was introduced into teaching and instruction in sign language for the hearing. The school employed a special teacher liason person, interpreters and a separate administrator for hearing impaired pupils.

Fleischer (1978) has presented a number of valuable views in a paper concerning socialization and personality development. But to some extent, she bases her accounts on reports which deserve special comment. These are Evans (1975) and Raviv et al. (1973). Evans found that deaf teen-agers at boarding schools were more isolated and estranged from societal norms. Evans has been criticised by Youngs (1975) and Stevens (1976) for shortcomings in his research method and for using obsolete material.

From Raviv et. al. Fleischer cites that these authors found less social interaction among hearing impaired children in the school for the deaf than between hearing and hearing impaired pupils in an integrated school. It would have been appropriate to point out that teaching in Israel - even in schools for the deaf - is purely oral which impedes interaction between profoundly hearing impaired children.

Some few examples are to be found of attempts to evaluate the social situation of integrated hearing impaired pupils by means of systematic observations. McCauley et. al. (1976) report on a study of hearing impaired children in grades 1-4 who were individually enrolled in ordinary classes. The hearing impaired children proved to be more teacher-dependent than hearing controls. They had a lower frequency of peer contacts and had fewer friends. Nevertheless, in the concluding discussion the results are interpreted as distinctly positive which is somewhat difficult to grasp in the light of the data presented. The data presented are described as "interaction" and the authors differentiate between responses and initiative in making contact, but it does not clearly emerge whether this includes mutual reactions at each attempt to make contact or whether the behaviour of one individual only was registered at a time. The important thing, of course, is how each attempt to make contact is responded to and if it leads to interaction.

This lack of clarity is particularly pertinent to two Swedish reports Granström (1974) and Grönwall & Adrell (1975). Granström finds no difference in peer contact frequency for hearing impaired and hearing pupils, but does find a higher frequency of teacher contact for the hearing impaired. Grönwall & Adrell find a lower frequency of teacher contact for the hearing impaired, lower peer contact frequency and fewer friends. Neither report differentiates between contact initiatives and responses and the reader is not enlightened as to whether it really is interaction or only attempts at making contact which have been registered.

This lack of clarity may to some extent be accounted for by the method of investigation employed. In studies in which direct observation is backed up by video recordings, one finds on analysing the recordings - which may be examined an infinite number of times - that it is very difficult to comprehend what is really happening in an instance of interaction by direct observation methods. (Nordén et al., 1979; Preisler, 1979).

A number of problems are presented in Granström's and Grönwall & Adrell's reports. Granström, for instance, mentions the need for information and preliminary planning and demands from teachers for back-up support and interest. Grönwall and Adrell note that some pupils have difficulty in keeping up with the teaching, not daring to ask questions or to answer the teacher, difficulties in hearing what their classmates say and other problems with classmate contact. In these reports by McCauley, Granström and Grönwall, the goal of school placement would seem to be assimilation.

From Sweden, there are three major reports of investigations conducted by profoundly hearing impaired researchers. Danielsson (1976) has conducted a follow-up in the form of an intensive study on a deaf pupil placed in an ordinary classroom and finds that the pupil's pattern of adjustment is characterized by an endeavour to "pass himself off" as a hearing person. Lind (1973) has studied the attitude of pupils, parents and teachers to the sixth-form college for the hearing impaired in Örebro. Lind also puts forward proposals for corrective measures in so far as he finds problems. Renner (1977) attempts to gain a picture of pupil, parent and teacher views of school placements in a comparison between deaf school pupils from "deaf classes" at an ordinary school with pupils from the school for the deaf. He finds that they are by and large satisfied with the placement made. With regard to the pupil's view of their school placement, Magne (1976) observes that they normally wish to continue in the group in which they have been placed.

The total picture of studies focusing on the effects of school placement on hearing impaired pupils is that we as yet have grossly incomplete knowledge of the pupils' situation. A contributory cause of this is imprecise criteria and vaguely formulated goals and, in consequence of this, results which are not comparable. The absence of data on pupils' hearing loss and background and the lack of information as to the method of communication used in teaching makes the interpretation of many reports a tricky business. A lasting impression from the review of literature is the great number of criticisms of individual integration as a basic solution and the calls for careful preparation, planning of and follow-up on school placements.

4 RESEARCH OBJECTIVES

In a preceding section, the problems of the hearing impaired have been described chiefly as a problem of communication, conditioned by the fact that they live in a society designed by and for hearing individuals. Their difficulties would seem to be largely a function of the pressure from the environment to adjust - i. e. to function "as if" they were normal-hearing individuals. This is, of course, not a complete description. Problems arising from the fact that the physical surroundings are experienced in a different way because sound impressions are not apprehended or are reduced/distorted, have not been discussed. Vision must be used to compensate for absence of auditory impressions. The hearing impaired person must use his attention to orientate himself visually in relation to events in the environment, which people normally register automatically with their hearing. This is a part of the daily life of the hearing impaired and entails a load requiring extra energy output, which may produce a drop in their tolerance level. Therefore all measures must be taken to lessen their load.

4.1 Discomfort caused by technical aids

4.1.1 Restrictions on freedom of movement

Technical equipment is an invaluable aid for many hearing impai-

red persons but what negative effects can these aids carry with them? What does using a body hearing aid entail? To what extent is the physical freedom of movement restricted? Apart from individuals with mild moderate hearing loss who benefit from the use of head hearing aids, body hearing-aids with leads to ear moulds must be used. How does this affect physical activity - participation in games, competitions, sports? At the pre-school age, for instance, how do you turn a somersault wearing a body hearing aid? The problem must be seen in relation to the size of the body at different ages - pressure per kilo of body weight - and is probably greatest during the physically most active periods. How restrictive should one be in furnishing children with body hearing aids? Should not less discomfort justify large sums being put into designing head hearing aids with sufficient efficiency? And, in terms of appearance, what does it mean at sensitive ages when clothes can rarely be a really neat fit because the hearing aid must be in position.

In some schools, there are still instances of ear moulds being connected to a group amplifier. What restrictions does this entail with regard to group work, cooperation, going and fetching a book to look something up in, etc.

4.1.2 Unpleasant sound impressions - noise and resonance

Risberg (1978) observes that we do not as yet know what sound impressions are conveyed via a hearing-aid in a classroom environment. According to Risberg, it should be possible to measure this. What the hearing impaired pupil apprehends cannot be measured, but a simultaneous recording of sound effects from the hearing aid and the hearing impaired pupil's reactions by means of video recording in combination with direct observation should provide valuable information on the pupil's situation. The majority of us have experienced noise to be a stress factor but we lack detailed information as to the effects of continuous noise under various conditions. It is likely that we put up with

more noise when we are occupied with interesting, absorbing tasks. Boring work is indeed a stress factor per se. Maybe we have to ensure that the hearing impaired pupil always has interesting tasks if we are unable to come up with an acoustically acceptable environment?

With regards to the complex of questions mentioned above, it should be possible for experiments involving hearing subjects, subjected to simulation of hearing loss, to provide some essential information. How are subjects affected under different conditions, when performing different types of tasks, in different situations? Does social activity - a party for example - present itself as stimulating and pleasant when one is wearing a technical appliance making a continuous noise in one's ears, or does one prefer to withdraw from social activities?

4.2 Social interaction - problems of the hearing impaired

A hearing impairment is a factor disruptive to communication and can be an effective impediment to social interaction. The term "communication", however, is used in a variety of senses and must be defined. In everyday parlance, the word normally alludes to mutual understanding, i.e. a recipient of a message has understood what the sender meant. The word is also used in this sense in telecommunication and information theory. But sometimes we use the word in another way to denote that something has been perceived even if a sender did not consciously intend to communicate anything. This is the definition used by some behavioural researchers. Rosenthal (1967) describes "unintended communication", Watzlawick & Beavin (1967) contend that communication in some form is inevitable in social situations and Weakland (1967) observes that even the absence of communication conveys something. "... communication is ubiquitous and inescapable (even silence is a message) ..." (Weakland, 1967:2). In order to distinguish between the concepts, "communication" will be used here to denote understanding of messages and the term "social signal" to denote that something is apprehended without a sender intentionally trying to convey a message.

Social interaction of people involves intricate patterns of communication which are interwoven with social signals. These signals have a crucial influence on the communication. What social signals are present when communication is not flowing? What signals does a hearing impaired person receive when an utterance has to be repeated? And a request for repetition - what is signalled here to the hearing people around him?

How do hearing people perceive the hearing impaired person's signals? We have, for instance, very fixed and conventionalised rules for eye contact - which the majority of us are completely unaware of. The hearing impaired person, who is so dependent on visual information, perhaps looks too much and in the wrong way? How does this affect the people around him? And how often does a hearing impaired person encounter a lack of meaningful relations because, due to the attitude of the people around him - their social signals - he avoids attempting to procure sufficient information. Social signals are usally very subtle but, at the same time, tremendously effective.

It is essential to attempt to penetrate these mechanisms of interaction - which must be investigated at different age levels - since they play a crucial role on an unconscious level with respect to the approach and attitudes towards the hearing impaired person. If changes are to be brought about, it is necessary to know what it is that has to be changed.

Studies which can provide information about mechanisms of interaction call for thorough investigative methods and close cooperation with the practical work in the field. In a study of social interaction in preschool groups (Preisler, 1979) it is found that the only possibility of actually obtaining relevant data for an analysis of interaction mechanisms is intensive direct observations combined with video recording. Recording must be repeated continously over long periods of time and the research staff must be present so often in the situations recorded that the staff become "a part of the furniture" and do not attract any attention.

4.3 School placement

Despite the fact that we in this country have a relatively wideranging system of integration, a total picture of school placement of the hearing impaired is not available. A general survey conducted by Hammarstedt (1979) provides information as to the number of hearing impaired and their school placement. The National Board of Education has also initiated a study - taking place at the Malmö School of Education - which was commenced in 1978 and covers hearing impaired pupils placed in ordinary schools in Skåne, in southern Sweden.

The object of this study is an investigation of goals of integration in different school settings, how planning has taken place and what supporting services, which are supplied to realise the goal. Intensive studies will be conducted to a limited extent in order to explore possible differences between the general view of the pupil's circumstances and objectively recorded facts. The study will also comprise the tracing of pupils who have discontinued their studies, and interviews with adults, former integrated pupils, to obtain their view of their schooling and their adult situation.

This study should provide valuable insights, which also provide information as to how consistently the individual is followed up in transition stages and after leaving school. Without feedback information of this type, there is no chance of evaluating the result of school placement.

It would, however, be desirable to carry out longitudinal studies of individual cases. Longitudinal studies provide the potential for an evaluation, in which critical factors can be recorded and counteracted - at a stage when this action really can have the desired effect.

By experience we know that, for some pupils, school placement seems to function well at the beginning or during the whole of the primary school period. But some of these pupils gradually lag behind, which carries with it failures and problems and often makes a re-placement necessary. Ross (1978) has observed the same phenomenon. Our knowledge as regards the background to the slide is incomplete. Teaching has obviously not corresponded to the needs of the pupil. Could it have been differently arranged, or was the school placement as such, inappropriate?

Longitudinal studies should take place in close cooperation with the practical work in the field. They also provide unique opportunities for cooperation of this type. In the long term this will be the only viable way to real knowledge as to the best possible circumstances for the individual pupil and what conditions have to be brought about in practice. Cooperation in the practical situation allows scope for a mutual exchange between researches and teachers, allowing us to learn from each other in our common endeavour - to learn from the pupil.

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x) Available in Swedish only.

1) Available in Danish only.

2) Available in German only.

PART III Visually impaired children

RESEARCH AND DEVELOPMENT FINDINGS IN SWEDEN ON INTEGRATION OF VISUALLY IMPAIRED PUPILS

Harry Svensson

The reference group has met twice and has also served as an advisory body to the author.

The members of the group were as follows:

Mats Myrberg, research project leader
Bengt-Olov Sennerö, educational adviser
Nils Trowald, research project leader
Sven-Inge Windahl, research project leader

Kerstin Ahlström, school welfare officer, and Jan-Olov Kennberg, director of studies, have assisted in providing information about Ekeskolan. Ann-Kathrin Hallén and Hans Smedshammar have contributed with information and views in their capacity as research assistents.

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Note:

The term 'comprehensive school' is used to denote Swedish 'grundskolan', a blanket term for the years of compulsory schooling (7-16) covering primary, middle and senior levels but excluding the sixth-form college, used here to denote Swedish 'gymnasium'. No contrast with grammar school etc is implied for the purposes of this report.

This compilation of research and development findings and experience concerning integration of the visually impaired concentrates on the work relating to the comprehensive school,[1] the sixth-form college and the special school. There are, however, problems associated with the preschool period which could thereby be of significance to the visually impaired pupil's initial period at school. For this reason, studies concerning visually impaired preschool children have been included. Furthermore, one of the goals of school is to prepare the pupil and provide the basis for a future occupation and for further education/training and for this reason, studies concerned with the transition from school to working life have been included.

Integration of visually impaired pupils has undergone a relatively rapid change in both scope and character and it has therefore been found desireable to make a brief summary of developments during the 1970's.

1 VISUALLY IMPAIRED - WHO IS?

A handicap is in many respects an extremely relative concept and arises when the individual cannot meet or satisfy one or more of the demands made by his environment. Society naturally endeavours to reduce these demands but it is doubtful whether we shall ever reach the situation where all "handicapping" elements have been eliminated - by eliminating certain elements for one group, one may risk creating new impediments for an other group. Much has been done to eliminate impediments for people with functional impairments but a great deal still remains to be done and it is at least as important to prevent new impediments or handicapping factors from being introduced into society.

In the case of persons with losses of vision, as with persons with other functional impairments, it is difficult to draw a clear line between handicap/visual impairment and non- handicap/non - visual impairment. Loss of vision may, in a particular

1) See note, after list of contents.

situation and given certain environmental conditions, prove to be such a great functional impairment that one may talk of a handicap. In other situations, the same person may function in an appropriate and optimal manner. Two people with comparable degrees of visual loss may, in one and the same situation, function so differently that one is regarded as handicapped and the other not.

Regardless of these demarcation problems, certain rules of thumb have been developed. One of these says that if visual acuity is less than 0.4 after correction with a lense, if necessary, or if the visual field is less than 20° - then the functional loss of vision is so great that one actually may talk of visual impairment (Lindstedt, 1973). Visual acuity limits of 0.3 and 0.2 can also be found in the literature. In legal and insurance cases, the parties involved have often chosen to use fixed criteria in the form of visual acuity measurments. One of the terms to be found in Anglo-Saxon literature is "legal blindness", which refers to a visual acuity of less than 20/200 (0.1).

In Sweden, the Social Insurance Board, for instance, has devised rules for assessing the degree of invalidity entailed by an eye-injury. Elsewhere, the tendency has been towards abolishing fixed demarcation. The Association of Swedish County Councils uses the following definition of visual impairment in prescribing optical and other aids:

> "what is meant by visually impaired here is a person with a visual handicap of such extent that serviceable visual function cannot be obtained with normal corrective lenses but where this function - or, in the second instance, a serviceable substitute function - can be obtained with a suitable aid" (Association of Swedish County Councils 23.7.76 ref Lf A 85/76).

Besides drawing the line between visually impaired - non-impaired, we also find in the literature attempts to distinguish various sub-groups, e.g. partially sighted, profound or heavy loss of vision and severely visually impaired/blind (e.g. Lindstedt 1973, Lindqvist 1975, Otto 1978). Here too, the boundaries can be fluid and furthermore, there has been a shift between the groups in recent years. Lindqvist states, for example, that individuals with profound losses of vision "have such losses of vision that serviceable reading vision cannot be obtained even using aids... Visual difficulties of this degree usually arise when the visual acuity is 0.1 or lower..." development of new technical aids and a change in attitude towards the potential utilization of very low levels of residual vision have enabled those individuals with profound losses of vision to read black print. There has likewise been a shift in the boundary between partial vision and blindness so that a number of people who would have been regarded as blind in the past, are regarded today both by the people around them and do themselves function as partially sighted people.

In an educational setting, it is very often sufficient to make a division into the sub-groups partially sighted and profoundly visually impaired (blind). The former group, although with a greater or lesser degree of difficulty, can read black type and other visual information in contrast to the severely visually impaired who are normally referred to Braille and/or tape-recorded books as reading and informative media. In this report the term visually impaired is used as a blanket notation for the two sub-groups: partially sighted and severely visually impaired.

2 TEACHING THE VISUALLY IMPAIRED: INTEGRATION - SEGREGATION

Under the Education Act the State bears responsibility for teaching those pupils who are unable to follow tuition in the ordinary school system because of visual, hearing or speech impairment. This tuition is provided in a special school following the ordinary school curriculum but with certain modifications in view of the handicapped pupils' more specific needs, which is why schooling lasts for ten years (instead of nine). The visually impaired receive tuition at the Tomteboda school in Solna, outside of Stockholm, and the visually impaired with additional handicaps at Ekeskolan in Örebro. The special school in Sweden has provided tuition of the most severely handicapped pupils whilst the partially sighted nearly always in the past and at present always do receive their tuition within the ordinary school system and are, therefore, regarded as integrated.

Gissler (1971) compiles the following list of different forms of tuition for "tuition of the blind" and "tuition of the partially sighted" in the West:

Tuition of the blind	Tuition of the partially sighted
1. school for the blind with residential facilities for children who live too far away from the school to be able to travel home daily	1. special school for the partially sighted
2. school for the blind, to which the child travels daily to and from his parental or foster home	2. special class for the partially sighted at a school for the blind
3. special class for the blind in a place where there is a number of blind children	3. special class for the partially sighted at a school for seeing children

4. individual blind child placed in an ordinary class but receiving some form of extra help, e.g.

a) books and other aids from a teaching resource centre

b) visits by itinerant teachers regularly coming to the class and giving expert help to the school, the child's teachers and parents; this teacher can be stationed at a clinic which serves one or a number of schools with blind children attending ordinary classes or itinerant teachers within a large area

c) individual tuition (auxiliary teaching) by a itinerant teacher or form teacher or some other teacher.

4. individual partially sighted pupil in an ordinary class often with support the same as for blind children, alternatives 4 a-c.

"Tuition of the blind" in Sweden is conducted today in the form of categories 1,2 (for pupils living in Stockholm) and 4. Form 3 did exist until 1978 in Gothenburg. For the partially sighted, tuition is provided in the form of category 3 (Stockholm and Gothenburg) but far and away the biggest group is to be found under 4.

Despite the fact that attendance at the special school is a compulsory ten years, few pupils during the last decade have spent the whole of their compulsory school period at Tomteboda. In somewhat simplified form, we might say that the trend from the 1960's to the present day has moved away from integration of severely visually impaired pupils at the point of transition to the senior level of school[1] and towards greater integration in the very first year of school. As shown in Figure 1, the number of pupils at the Tomteboda school has fallen from 130 at the end of the 1960's to 41 for the 1978/79 school year.

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1) Age 13.

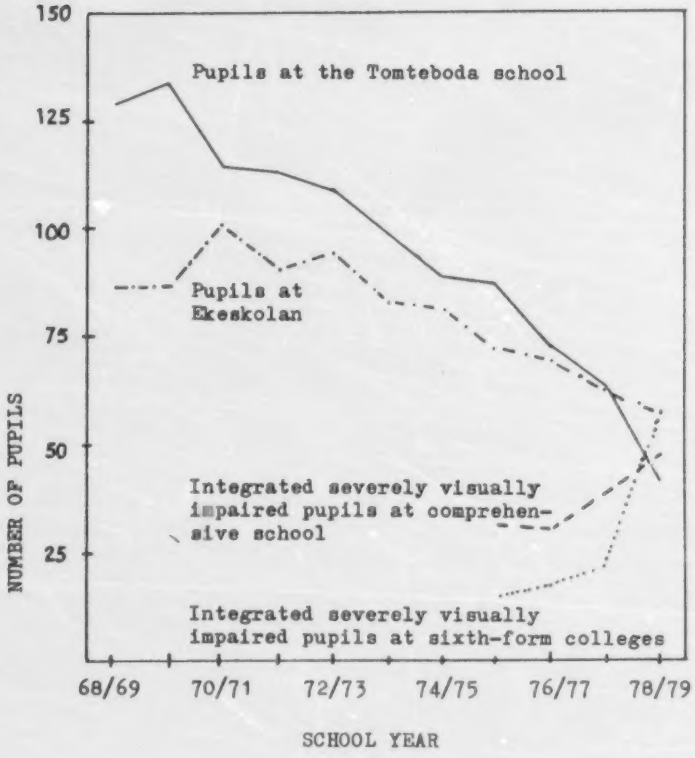

FIGURE 1. Number of pupils at the Tomteboda school and Ekeskolan and integrated, severely visually impaired pupils at comprehensive school and sixth-form college.

At Ekeskolan too, integration has been noticeable, even if not to the same extent as at Tomteboda. At the beginning of the 1970's, there were at most 100 pupils enrolled at the school whereas the number of pupils for the 1978/79 school year is 57. In addition to this, Ekeskolan has a number of places for observation attendance. It is interesting to note that the composition of the Ekeskolan pupils has gradually changed in such a manner that the school bears increasing responsibility for teaching pupils with ever more severe additional handicaps. Figure 1 also shows the number of integrated, severely visually impaired pupils at comprehensive school and sixth-form colleges registered with itinerant teachers in the regional support service for visually handicapped pupils.

Overall, the number of severely visually impaired comprehensive school pupils (Tomteboda + integrated) has fallen during the last 10-year period.

One of the reasons is probably that the risk of disorders caused in the incubator by too powerful a supply of oxygen (retrolental fibroplasia) has been detected. However, it cannot be ruled out that new aids etc. have produced a shift in the dividing line between blindness and partial vision.

Table 1 gives the number of partially sighted comprehensive school and sixth-form pupils registered with itinerant teachers. It is noteable that the number of sixth-form pupils has decreased simultaneously with an increase in the number of comprehensive school pupils. Does this mean that there is declining interest in sixth-form studies among the partially sighted or is it that the itinerant teachers put priority on visiting comprehensive school pupils and sixth-form pupils receive no visits and are therefore not included in the statistics?

TABLE 1. Partially sighted comprehensive school and sixth-form pupils registered with itinerant teachers.

School year	Comprehensive school including classes for the visually and hearing impaired	Sixth-form colleges
1975/76	890	172
1976/77	945	172
1977/78	961	162
1978/79	1 005	148

With regard to visually impaired pupils at special school for the mentally retarded, there is still uncertainty as to the exact number, but studies of recent years indicate that this group is probably larger than the total number of visually impaired pupils in the ordinary school system.

With respect to integration of visually impaired pupils, we may observe that the terminology used derives from the size of the group integrated rather than from the form of integration [1]. Thus, the term individual integration is used for both the partially sighted and the

[1] For a more detailed discussion of the various forms of integration, see the earlier chapter in this report dealing with integration in the special school.

severely visually impaired signifying that there is only one visually impaired pupil in the class. Thus, by virtue of the pupil's presence in the class, physical and functional integration is assured, in the sense that the pupil is there in the group. It does not necessarily mean, however, that he/she has close and spontaneous contact but rather can feel that he/she is outside of the social community. Regardless of what handicap is concerned, we cannot presume that integration during school years, irrespective of what form or designation this has, automatically results in societal integration, e.g. in the form of a productive working role or a complete education.

The other form of integration, which has only been used in connection with teaching the partially sighted, is group integration in the form of a special class for the visually impaired within the ordinary school system. Over the years, this form of integration has only taken place in the three largest cities in the country [2], where groups of partially sighted pupils have been brought together to form one or a number of classes located in a school unit where ordinary school classes also take place.

This form of integration exhibits certain similarities with the facility or physical integration employed at the special school. To use the terminology expounded by Söder in the section dealing with the special school for mentally retarded, we may also observe that a functional integration at least has been achieved in the classes for the visually impaired through co-utilisation of the resources available at the school. Social integration, however, is not such a given as in the case of individual integration, since the pupils in the classes for the visually impaired may be virtually without the social contact and company of the other pupils at the school.

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[2] At present, this type of class for the visually impaired is to be found only in Stockholm and Gothenburg.

If we proceed from the lexical meaning of the word integration, i.e. to unite separate parts in a whole, it might seem wrong to include the partially sighted pupils, as they have always been integrated to a very large degree. The same argument could be used with regard to sixth-form education of all partially sighted pupils since individual integration is used here to a large extent. A number of reasons, however, can be given as to why this compilation should take in both groups; for example:

- using medical criteria, they are classified as visually handicapped
- the school has earmarked certain special resources for visually handicapped pupils
- in theory, it is possible to imagine a segregated system of education, as is the case in Great Britain, for instance, where they have special schools for the partially sighted.

Pupils who have a combination of visual impairment and mental retardation represent a kind of intermediate type by virtue of their virtually all being individually integraded in the more or less segregated group of mentally retarded pupils with own schools. It is interesting to note that though there is a clearly defined goal of integrating the mentally retarded within the special school as a whole, the BDR Committee of Enquiry[3], for example, talks of a segregation of the mentally retarded, visually impaired children in the form of plans to concentrate them in special regional units.

Especially in the case of the early integration of severely visually impaired pupils, it is difficult to find the same distinct goal such as has been expressed in connection with the integration of the special school for mentally handicapped, for instance. The advocates of early integration are chiefly to be found among the ranks of the visually impaired themselves whilst the statements made by the National Board of Education reflect a certain amount of caution;

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3) The Blind, Deaf and Retarded (BDR) Committee of Enquiry.

they state that visually impaired pupils should "as far as is possible, be integrated into ordinary classes" and that integration of severely visually impaired pupils immediately on entering school "may be possible for certain pupils if the necessary resources can be made available" [4]. For a more detailed account of the debate and the development of integration in Swedish schools, the reader is referred to Lundström (1979).

3 PRESENTATION OF STUDIES CONCERING INTEGRATION OF THE VISUALLY IMPAIRED

In contrast to the special school for mentally retarded and physical handicap areas, no research and development projects of a more comprehensive type have been conducted into integration in the visual impairment sector. When one examines the studies carried out, one finds that these have either only studied particular aspects of integration or that issues relating to integration have been discussed as a by-product, i.e. the study has had another primary object but, during the course of the project, issues relating to the integration of visually impaired pupils have been touched on. An additional problem is that the studies have been conducted during a period of time, in which integration may be said to have partly altered in character and, above all, broadened in scope, and for this reason it is not to be taken for granted that the results reported concur with the situation in which we currently find ourselves. Finally, we must note that a number of studies are still unpublished and the data collected has only been subjected to limited processing. In view of these circumstances, it has therefore been found necessary to present the studies independently of each other and, in addition to reporting results, to give an account of the organization and scope of the study in order to facilitate interpretation and evaluation.

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4) Circular from the National Board of Education to the Department of Education Ref S 76:2325 and S 77:1326.

3.1 Visually impaired children of preschool age: views of parents and teachers; problem charting

Dahlquist has conducted three, as yet unpublished, studies on the situation of visually impaired preschool children and their parents. The object of these studies was to:

a. map out the emotional reactions of the parents towards the child, in which way the visually impaired child affects the situation of the family, what knowledge the parents have of their child's potential, what need they have of help from experts and informal groups etc. (interviews of 15 families).

b. map out the parents' view of current courses for parents (questionnaires to 45 parents who attended the courses between 1973 and 1975)

c. map out nursery school teachers' views of integration of visually impaired nursery school children and to describe various types of problems associated with integration (questionnaire to 61 nursery school teachers having visually impaired children in their groups).

The Tomteboda School arranges courses annually for parents of visually impaired nursery school children. Dahlquist's report of the views of the parents about these courses show that the courses fulfill an important function. Depending on the child's degree of loss of vision, however, the parents had dissimilar wishes on certain points. In addition to the aspects of imparting knowledge and information, the parents also stressed the social function. Parents of integrated visually impaired nursery school children thought that their chances of meeting other parents in a similar situation for an exchange of opinions and experience, outside of courses and conferences, were pretty slim.

An interesting aspect with regard to the child's future schooling is the parents' views of integrated teaching and teaching at a special school for the visually impaired.

Better to have earlier integration	Parental attitude to special school				
	Positive	Negative	Undecided	No reply	Total
Yes	11	13	2	1	27
No	9	0	3	0	12
No reply	1	0	1	1	3
	21	13	6	2	42

27 (64%) of the parents thought that earlier integration than is presently the case would be better for the child and about half of these parents adopted a negative attitude to the special school. There was no demonstrable difference between parents of children who were blind/could perceive light and parents of children with locomotor vision/image perception. Furthermore, the parents of younger children (born 1971-74) were more positive towards earlier integration than the parents of older children (born 1964-70).

The 45 nursery school teachers were asked if it would be of value to them to have a follow-up on the visually impaired child after he/she had left the nursery group. 44% thought this would be quite valuable, 52% even thought it was a matter of urgency. Their requirements are distributed as follows:

22% contact with the primary school teacher
24% visits to the child at school
11% reciprocal visits
15% carry on with contact with parents
9% information from educational adviser or primary school teacher

3.2 Being blind in childhood: a study of former Tomteboda pupils

Darnhede & Mets (1976) report on a study of 112 former pupils who had left the Tomteboda School between 1963 and 1972 in years 8-11 after at least five years at the school. The object of the study was to describe

this group and to chart problems of a social or psychological nature, among others. The study describes the former pupils':

- current situation
- experiences of and views on the years at the Tomteboda School
- choice of occupation and experience of rehabilitation
- training
- work experience
- some financial circumstances
- something on other aspects of their lives (family, housing, leisure etc).

With regard to experiences of and views on their time at Tomteboda, the overall impressions of the former pupils varied. One third remembered that they hated it more or less intensely whereas one fifth thought it relatively enjoyable. Another fifth thought the school was good on the whole whilst they were there but had become more critical recently. On the whole, it had been most difficult to adjust during the primary school years. The former pupils were most critical of the residential system employed at the time. There was also great dissatisfaction with the facilities for "learning" to socialise with seeing people in a natural manner. On the other hand, the relations between friends were one of the things most appreciated during the time at the Tomteboda School. As regards the forms of tuition and teachers, they were in general considerably more satisfied on these points than on accommodation. The report, however, discusses the need for up-to-date educational material, instruction in shopping methods and training in reading and studying techniques during their time at the school.

106 of the 112 former pupils had gone on with their studies/education in some form or other after Tomteboda. The authors point out that in a considerable number of cases there has been "over-education" compared with subsequent work or compared with what the person was actually interested in. Furthermore, the results indicate that the choice of occupation was largely made haphazardly and that, at the outset, this was directed more by the impairment of vision than by interests and aptitude.

The average educational level of the group was high: at the time of enquiry 36% had completed a sixth-form education or had a degree whilst a further 25% were undergoing education of this type. Almost half had (at least one) completed course of vocational training. 13% had been compelled to undergo vocational training two or three times as they had not succeeded in obtaining work. It is noteable that one fifth of the group had been considered as needing the rehabilitation course for visually impaired adults: "Adjustment and training".

3.3 Individual integration of severely visually impaired pupils in the ordinary school system; views from a teacher questionnaire

Lindqvist & Trowald (1970) report on a questionnaire survey, in which the teachers with integrated, severely visually impaired senior level pupils were asked about:

- prior information to the visually impaired pupil's teacher
- visits by the itinerant teacher
- access to teaching aids
- the teaching resource centre test paper service
- access to literature in Braille or on tape
- teacher presentation of subject matter during lessons
- the pupil's adjustment to daily school work
- the teacher's view of daily schoolwork with a visually impaired pupil in the class.

The study presents an account of replies from 51 teachers, who taught 191 pupils in English, chemistry and social studies in the final two years of compulsory school. The pupils have not been approached in the study.

The results of the study indicate that there were certain shortcomings in the system of integration in 1969. Among these shortcomings, we might mention that not all teachers had received prior information to the effect that they would be having a visually impaired pupil in the class, the majority of teachers thought that the first visit by the itinerant teacher was too far into the term, late delivery of teaching materials

and lack of supplementary reading. The majority of teachers, were not of the opinion that the other pupils suffered from the necessary auxiliary information being given to the visually impaired pupil during lesson time but requests were made for timetabled auxiliary teaching. 88% of teachers thought that they had had some extra work with the visually impaired pupils in the class but over half regarded this as less than they had expected at the outset.

Two follow-up studies have been made during 1973 and 1977 by Trowald. These studies have only been subjected to limited processing and are therefore not published either. This review will give a brief presentation of each study and some examples of the information compiled.

The 1973 questionnaire survey was addressed to the severely visually impaired pupils' teachers in the same subjects as 1969, i.e. English, chemistry and social studies. The questionnaire was designed on the basis of the one used in 1969. Apart from teachers in the final two years of the senior level of the compulsory comprehensive school, information was gathered from sixth-form teachers in the same subject. The 1973 study also included telephone interviews with the pupils.

In 1977, another questionnaire survey was carried out covering teachers in the three previously mentioned subjects throughout the three year senior level of the compulsory school and the sixth-form. The questionnaire is based on the ones used in 1969 and 1973. A special questionnaire was also supplied to middle school form teachers who had integrated, severely visually impaired pupils. Interviews have also been conducted with pupils at the senior level and in the sixth-form.

Both the follow-up studies have dealt with the problem areas mentioned in connection with the presentation of the 1969 study. As examples of the data compiled, we reproduce here the results of replies to questions concerning the point in time for information to the teacher that a severely visually impaired pupil is to attend the class and the teachers' assessment of the itinerant teachers' visits. It should

be observed that it is extremely risky to make wide-ranging comparisons between the different studies, as the groups studied are of different composition.

Year of study	Scope of study	POINT IN TIME FOR INFORMATION FOR TEACHERS (percentage distribution)						n
		> 3 mth before	1/2 - 3 mth before	< 1 week before	no info	don't remember	no reply	
1969	yr 8-9	39	23	18	16	2	2	51
1973	yr 8-9 + 6th-form	19	28	19	18	1	15	79
1977	yr 7-9 + 6th-form	9	48	29	9	5	-	90

Year of study	Scope of study	ASSESSMENT OF ITINERANT TEACHER VISITS (percentage distribution)					n
		very valuable	fairly valuable	fairly worthless	extremely worthless	no reply	
1969	yr 8-9	43	31	12	4	10	51
1973	yr 8-9 + 6th-form	32	39	13	2	14	79
1977	yr 7-9 + 6th-form	18	52	15	4	11	90

The first table shows that the trend has been for teachers to receive information nearer and nearer to the start of school. At the same time, the number of teachers who have not received any information at all has fallen, especially from 1973 to 1975. Despite this, the 1977 study shows that there were 9 teachers who, at the point of enquiry at the end of the Spring Term had still not received a visit from an itinerant teacher. Furthermore, the studies indicate a tendency for teachers to ascribe the itinerant teacher visits less significance the later the point at which the study is carried out.

3.4 Interview survey with visually impaired pupils who received grants from the National Board of Education in 1976/77 for personal assistance

Myrberg has conducted a study, as yet unpublished and only partly processed, of how visually impaired pupils utilize a reader's help (personal assistance) and a work assistant's help so as to obtain data on which to base an assessment of the importance new technology may have. One of the objectives of the project entitled "Supply of information to the visually impaired at school and at work" is to study how new technology in the information media field (reading aids, printing technology, synthetic speech etc) can be used and coordinated with existing resources for visually impaired individuals working or studying.

The production of educational material in Braille and in the form of literature on tape can be a "bottleneck" in the study situation for many visually impaired people. Production resources are often insufficient with heavy delays in production as a result. Much of the material is supplied to the visually impaired so late that emergency solutions have to be resorted to in order to cope with the situation. Much material of the occasional type cannot be produced as a tape-recording or in Braille at all. These views emerged in a questionnaire survey concerning the study situation of the visually impaired conducted in 1971. The new resources for computerised production of Braille and synthetic speech provided during 1977/78 may possibly improve the situation for visually impaired pupils in this respect.

The total of 76 people who received funds for personal assistance in 1976/77 according to the National Board of Education and student literature division files of the Swedish Federation for the Visually Handicapped, divided into 18 persons at sixth-form college, 25 in adult education and 33 in higher education. As standard allowances are paid to local authorities for comprehensive school pupils, it is not possible to obtain the names of visually impaired comprehensive school pupils receiving a reader's help.

A random selection of twelve sixth-form pupils, ten students in adult education and 18 students in higher education were interviewed but the latter has only been partly processed.

3.5 Interview with integrated pupils' form teachers

Von Bahr et. al. (1977), in a thesis written during special teacher training, reports on a study of how form teachers with Braille-reading integrated pupils felt about their situation. The results are compared with an equivalent questionnaire survey which the authors had carried out in Denmark. The results are based on replies from 18 of 26 teachers asked in Sweden and 15 of 30 in Denmark.

The thesis enables us to make some interesting comparisons between Sweden and Denmark on certain points. The Danes have been working for a considerably longer time with early integration of severely visually impaired pupils, which is shown in the study; 10 of the 15 Danish pupils had been integrated in the first year of school. In Sweden, only one of 18 pupils had been integrated at the same point in time.

Furthermore, all the Danish teachers had completed some form of special course dealing with teaching visually impaired pupils. In Sweden, one third of the teachers had attended a course of this type.

The study shows that the Danish teachers may receive 9 or 10 hours payment for 8 hours teaching if they have a handicapped pupil in the class. In Sweden, there is no equivalent. One of the Swedish teachers, however, had received payment for five hours a week instead of the pupil having a personal assistant. Two other teachers had received two hours' reduction in teaching duties. With regard to the extra work involved in having a severely visually impaired pupil in the class, the Swedish primary and middle level teachers reported this as 3-8 hours a week, the senior school teachers 0-3 hours. Seven of the Danish teachers reported 1-2 hours extra work and four 3-5 hours. The authors interpret

this as indicating that the Danish teachers had considerably more help from itinerant teachers, for example.

Furthermore, we may observe that two thirds of the Swedish pupils had a personal assistant compared with one third of the Danish pupils.

There is a very great difference between the two countries with regard to the frequency of itinerant teacher visits. On average, the Swedish itinerant teachers visited the pupils three times a year. In Denmark, the average itinerant teacher visits amount to 28 times a year and pupil!

3.6 Visually or hearing impaired children and their parents; a socio-psychological study

Mattsson & Varda (1975) report on a study whose object was to study how families with a visually or hearing impaired child feel about their situation. Our review here only deals with problems relating to visually impaired children and their parents.

The study was conducted in two stages. The first stage consisted of a questionnaire survey adressed to parents with children in classes for the visually impaired at the Alvik School[1)] and integrated pupils within the ordinary school system in Stockholm. The questionnaire survey, which was unfortunately affected by a very large proportion of non-response (Alvik parents 67% and parents of integrated children 43%) largely contains questions about the family's children and their conditions at nursery school and school + questions about their interests and situations as regards friends. There are additional questions relating to the child's visual impairment and questions concerning the parents or the family as a whole.

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1) A school with classes for partially sighted pupils.

In the second stage, an interview survey was conducted with seven parents of children attending classes for the visually impaired at Alvik School. The interview commenced with a review of the children's current situation - schooling, personal happiness or problems, friends - and the internal relations between brothers and sisters.

Due to the considerable non-response to the questionnaire and the limited number of interviews, one should avoid making too many generalisations. Some of the results, however, indicate substantial differences between pupils in classes for the visually impaired and their parents on the one hand and the integrated pupils and their parents on the other hand. With regard to wishes for changes in the school situation, the parents of the Alvik pupils brought up shorter journeys to school and integration whilst the parents of the integrated pupils wanted more individual help and understanding for their children.

There were substantial differences with regard to personal happiness - 25% of the Alvik pupils were not very happy at all or were simply unhappy at the school as distinct from 9% of the integrated pupils. Likewise, there are substantial differences between the two groups of pupils as regards friends. The Alvik pupils mixed largely with other visually impaired pupils, which - with one exception - the integrated pupils did not.

3.7 Studies of the needs of partially sighted children in the school situation

Svensson (1978 a) reports on a project whose object is to map out where the needs are for technical aids and environment design for different groups of partially sighted pupils at school. The study shows that it is not primarily a shortage of aids which is the big problem. The problems are rather of an administrative and organisational nature, which make it difficult to get the aids already available to the school quickly and to teach the pupil to use his/her aids.

In the report, the author draws attention to the differences between the comprehensive school and the sixth-form college. For pupils in the comprehensive school, the local education authority defrays all costs relating to procurement of aids for visually impaired pupils. For pupils at sixth-form colleges, the local education authority can apply for grants from the National Board of Education. A follow-up on pupils who went for consultation visits to the Tomteboda School showed that the pupil had to wait an average of 2.5 months for the aids which the school is recommended to purchase. The wait for personal aids (e.g. spectacles) and aids for the home was considerably shorter. These aids are paid for by the health service. The study has not managed to clarify if it is difficulties experienced by the local education authority in quickly releasing funds for buying aids which results in delays or if it is procedural shortcomings or other factors affecting the situation.

In the report, the author also notes that the shortage of itinerant teachers results in their not being able to provide the pupils, in adequate fashion and in conjunction with other social services, with the necessary assistance in learning how to use aids. Due to the fact that the itinerant teachers are unable to pay the visually impaired pupils any or only a few visits, the pupil, teachers and parents gain a very restricted view of the total support services for visually handicapped children and young people offered by society.

The report also deals with the absence of resources for in-service training of teachers who are to instruct visually impaired pupils. Since basic teacher training and special teacher training allocates no, or extremely limited, time to technical aids for the visually impaired, matters such as this must be dealt with on in-service training courses immediately prior to the teacher having a visually impaired pupil in the class. This is also warranted by the rapid technical development of aids which quickly makes knowledge obsolete.

Besides the fact that there is a lack of resources for in-service training there is also a great lack of material for information and study for teachers who wish to increase their knowledge about teaching visually handicapped pupils in conjunction with courses or by themselves.

The studies carried out within the project of the physical environment of the schools in relation to the needs of the partially sighted pupils produced depressing results. A large number of schools did not even satisfy the minimum requirements recommended for premises on which normal-seeing persons are to be taught. A very large proportion of the partially sighted pupils are in need of lighting intensities which are vastly in excess of the values considered acceptable for normal-seeing persons. The author notes that despite there being a high degree of knowledge in this country about the work environment in general and about the specific needs of the handicapped, this knowledge has been translated to a surprisingly small degree into specific action on our teaching premises and at schools.

It was also the intention that the project would study what needs the partially sighted with additional handicaps had. Listing the problems teachers spontaneously think of in connection with teaching visually impaired, mentally retarded pupils gave the following results:

- diagnosing and examining visual impairments
- educational aids and teaching equipment
- use of aids
- information and support services
- teacher training and in-service training
- the physical school environment
- other problems

A new project, "the visually impaired in the special school for mentally retarded", has been initiated for more in-depth work within some of the problem areas above.

3.8 Visually impaired and severely mentally retarded children

Windahl (1977 a,b) makes two reports on the BDR Project (see note on page 9), which was initiated as a result of the work carried out by the BDR committee (set up by the National Board of Education), who had been working on matters relating to teaching mentally retarded pupils with

additional handicaps in the form of a visual or hearing impairment. Another report, Lerman & Windahl (1978), presents views and facts bearing on county council BDR planning. Although this latter report focuses on the severely mentally retarded, hearing impaired pupils, it incorporates some fundamental views which are applicable to the organisation of educational resources for severely mentally retarded, visually impaired children and young people.

Windahl's first report (1977 a), "severe visual handicap - mental retardation" presents a number of different views on the relation between visual impairment (in particular severe visual handicap) and mental retardation. Our summary here, however, will focus on the second report from the BDR Project,which presents an account of a survey carried out during spring 1976 of visually impaired children and young people at the training school level or the equivalent resident in institutions in six counties in central Sweden. The principal aim of the survey was to provide a basis for educational development work and proposals for improving services.

The survey found 21 children who were totally blind or who only had light perception, 4 with only locomotor vision and 28 visually impaired individuals who are capable of discerning small objects to some extent. Converted into terms of the country as a whole, this implies that there should be at least 500 children and young people (aged 2-21 years) at the training school level or the equivalent, i.e. deep or severe mental retardation. As this is almost double the number the National Board of Health and Welfare found at the corresponding levels of development (1973) in its survey of 1970, the author gives a detailed comparison of the two surveys.

The report also discusses problems associated with identification and diagnosis of visual handicaps in severely mentally retarded children and young people. The author also points out that the children in question are placed at an early stage in an institution and that in the vast majority of cases, the stay tends to be a long one.

In the institution, they are placed among other non-visually handicapped individuals and receive roughly the same care and teaching, quantitatively and in terms of content, as other mentally retarded persons at similar levels of development. There are no specially devised and unified care and educational schemes for the visually impaired children.

The report also takes up shortcomings in cooperation between school and living, between training and teaching resources and a very great shortage of teachers with formal qualifications to teach at the training school level.

As a result of the experience gained from the BDR Project, Windahl has commensed a project concerning educational activation and stimulation programmes(the PEDAGUS Project).

3.9 The visually impaired in working life

Myrberg et al. (1976) present a review of gainfully employed, visually impaired individuals in Sweden. The survey shows that of a total of 9,100 people in the Federation of the Visually Handicapped central register of visually impaired members of "working age" (16-17 years old), only 1,490 were gainfully employed. Of these 1,490 people, 811 worked on the open market and their employment was the only source of income. This constitutes a 16% frequency of gainful employment among the visually impaired, which should be compared with 67% for seeing individuals in the corresponding age bracket. The results also show that the visually impaired worked in office occupations to a greater extent than seeing persons and in the occupational sectors of "public transport" and "the building industry" to a less extent than seeing individuals. "Manufacturing work" and "agricultural work" had approximately the same proportion of the labour market among seeing and visually impaired people.

The report contains an abundance of tables covering background factors, education, pensions and, above all, occupations. The report concludes with a discussion of the situation of the visually impaired on the labour

market and proposals to improve this. In their analysis, the authors point out that the majority of visually impaired persons in the under 20 age bracket, are presumably still undergoing education and have therefore not been covered by the study. This, however, reflects the labour market situation which we may presume these visually impaired persons have already encountered or will encounter upon completion of their education.

The survey shows that the major handicapping factors are the age at which the visual impairment developed, sex and low educational level. The survey also allows a comparison between educational status and occupational structure of gainfully employed visually impaired people who attended the Tomteboda School and those who attended another form of school.

Kerstin Ahlström, a school welfare officer, has conducted a survey of the 48 pupils who left Ekeskolan between 1967 and 1976 after completing a compulsory ten-year period of schooling. Pupils who had been integrated before they completed their compulsory schooling and pupils diagnosed as having Speilmeyer-Vogts syndrome are not included in the survey.

Work/occupation	Number
Open market	1
Sheltered workshop	3
Work at home	3
No work	9
Education	13
Day centres	19

4 SUMMARY OF RESEARCH AND DEVELOPMENT FINDINGS AND EXPERIENCE

At a meeting in June 1978, the Government resolved to set up a committee to enquire into the subject of integration of handicapped pupils in the school system and related issues. As a summary of research and development findings and experience on the subject of integration of visually impaired pupils, I have opted to take some of the committee's

terms of reference (1979:69) as my starting point in order to clarify which questions research can provide answers to and where knowledge is still lacking.

> The Committee shall present an account of the scope and the outcome of the various forms of integration.
>
> The Committee shall devote attention to follow-up of the handicapped pupils' schooling and the openings for work and meaningful employment available to them after their years at school.

The first question one must ask oneself is what is meant by "outcome" and "various forms of integration". Earlier in the terms of reference, the following are mentioned as various forms of integration: facility, activity and administrative/organisational integration. If we follow the summary of various concepts of integration presented by Söder previously in this report, we find that the terms of reference would only include the physical and functional forms of integration. Elsewhere in the terms of reference, however, one finds formulations indicating that social and societal integration were also alluded to.

Earlier in this chapter, it has been observed that some of the concepts of integration are not very manageable in relation to individually integrated pupils who, by virtue of their presence in the class, have achieved both physical integration and functional integration in the form of cooperation. At the risk of creating further conceptual confusion, however, I shall introduce the term educational integration to describe the situation of the individually integrated pupil.

Before we go into what research tells us, we must also attempt to clarify what is meant by outcome. On this point, the terms of reference of the Committee shed no further light. As a reader, one gains the spontaneous idea that the outcome must have something to do with result, but, in this case, what are these results to be related to, to enable one

to decide whether they are "good" or "bad". One can imagine that the results are to be related to the goals, in overall and subject terms, set forth in the curricula for the comprehensive school and the sixth--form college. It would, however, take us much too far away from the primary object of this review to discuss this aspect in depth.

With respect to the outcome of educational integration, one might say, somewhat provocatively, that research says nothing, since this aspect of integration of the visually impaired has not been studied in Sweden to our knowledge. Research results are likewise thin on the ground as regards the outcome of social integration, as only one study has taken up this area on a small scale. Mattsson & Varda's (1975) socio-psychological study of visually or hearing impaired children and their parents shows that pupils in classes for the visually impaired in Stockholm were less happy at school at the point of inquiry and that they were together more with other visually impaired children than is the case for the individually integrated pupils in Stockholm. The results of research into the societal integration of the visually handicapped are considerably more comprehensive and unambiguous. Myrberg et al. (1976) reports an alarmingly low frequency of gainful employment among the visually impaired, Darnhede & Mets (1976) discuss the problem of "over-education"and choice of occupation and the Ekeskolan study indicates the difficulties of the former pupils in obtaining work. The results are so depressing that one begins to wonder whether the school has not failed in it's goals of "preparing the pupils in an appropriate manner for their further education and activity in working life" (Comprehensive School Curriculum 1969, p 13) and similar formulations in Sixth-Form Curriculum 1970. It is also noteable that many severely visually impaired individuals have been found to be in need of a rehabilitation course (adjustment and training) for visually impaired adults shortly after leaving school.

The scope of integration is to some extent no research problem, as we already have relatively good statistics of the number of integrated, visually impaired pupils in comprehensive schools and sixth-form colleges. However, surveys showing which options in the sixth-form are chosen by the visually impaired are not available.

An assessment of the extent of integration of the visually impaired in special school for mentally retarded is made more difficult by the fact that the size of the group is as yet not fully known. This is partly due to the fact that there has not been access to the same range of resources, such as itinerant teachers keeping statistics. Furthermore, registration must be preceded by identification, i e a visual impairment must be detected. In the case of the severely handicapped pupils at the training school level or the equivalent, there are by and large no adequate methods of identification and diagnosis, which must be considered an urgent area for future research and development. By means of intensified efforts to track down and map out the number of pupils involved, data has been obtained in recent years showing that the number of visually impaired pupils in the special school is probably more than the total number of the visually impaired pupils in the ordinary school system. The project initiated by the BDR Committee of Enquiry demonstrated that only the group of severely mentally retarded, severely visually impaired children was wildly in excess of the Committee's estimation (Windahl, 1977 b). This is also confirmed by the preliminary results of a current survey in the county of Stockholm being carried out as part of a project entitled Visually Impaired Pupils in Special School, being conducted by the Department of Education at the University of Uppsala. In general, we may state that with regard to research and development, the visually impaired with additional handicaps must be regarded as a neglected group, which is why they have been "tucked away" in a corner of this review of research and development findings and experience.

> The Committee shall pay particular attention to the need for reliable selection procedures and follow-up on diagnostic methods and technical aids.

This directive would seem to ensue chiefly from the situation of the hearing impaired pupils but, in the terms of reference, it is stressed that the matters raised shall also be observed in the case of the other handicaps.

As regards the vision aspect, there is a clearly demonstrated need for methods and models for identifying and diagnosing visual impairment in children and, above all methods/models of the type which enable adequate stimulation and support to be given at a considerably earlier stage than is currently the case in many instances. The research and development required includes an investigation into the availability and serviceability of existing test methods, development of multi-disciplinary methods based on behavioural science and medicine, and organisational-administrative models for early identification and diagnosis.

Technical aids for the handicapped can have a characteristic of compensating or replacing a particular function. Regardless of what characteristics are involved, it is generally agreed that the visually handicapped are in need of one or normally more than one aid, which may be technically sophisticated and therefore expensive. Partially sighted pupils are primarily in need of functionally compensatory aids such as large print, lighting, optical aids and closed-circuit TV systems whereas the severely visually impaired pupils need a Braille machine, tape-recorder, synthetic speech etc of a function-substituting nature. The age we live in is characterised by tremendously swift technical change especially in electronics, which has also benefited the visually impaired. An example of this is synthetic speech - who would have believed a decade or so ago that a robot could speak other than in science fiction literature and films. Today, this is a reality even though the "talking calculator" as yet only speaks English due to the cost involved.

In many cases, this rapid technical development has put educational and other behavioural scientific research in a dilemma. The complaint is often made that technical and behavioural research and development do not go hand in hand. This is certainly not because of reluctance to collaborate on the part of anyone involved but may, in many cases, be a "problem of synchronisation". Technical research and development work is characterised by a relatively short span of time from idea to funds for research and development and then on to the finished product. The behaviourist researcher, on the other hand, may have to wait up to one and a half years from drafting the project until work can commence. In terms of aids, this

has meant that the behaviourist has in some cases had to content himself with studying "the effects of" a particular aid, since this is already available on the market. It should, however, be pointed out that the National Swedish Board for Technical Development has financed a number of multidisciplinary projects over the years, for which behaviourist experts have been engaged for analyses of needs and evaluation etc. The situation is further complicated by the fact that a large amount of development and production of technical aids takes place abroad, making it difficult for Swedish views to be heard as we constitute a very small market in the majority of cases.

Svensson (1978 a) believes that it is not primarily the shortage of aids which is the great problem for partially sighted pupils but that the problems are rather of an administrative/organisational nature, which make it difficult to get aids already available to the school and to teach the pupil to use his/her aids. In a sense, it is remarkable to note that it is quicker to get aids to the home than to the school, since different authorities bear the cost of procuring the aids.

> The Committee shall devote it's attention to the need for information to parents, teachers and pupils.
>
> The Committee shall analyse the input of resources - including personnel - required to achieve satisfactory results in relation to the goals set for the various forms of integration.

In these two terms of reference, we find two closely allied tasks - information and personnel input. First, however, we may observe that the goals drawn up are mentioned without further specification and one might wonder which it is that are involved - the general goals of the school, the subject goals or goals of integration. The various forms of integration can hardly have different goals, since integration of handicapped pupils is not to be regarded as an end in itself but rather as a means to attain normalisation in the sense that conditions of life are created which coincide as far as is possible with those which other members of society of equivalent ages have.

The chief source of information on visual handicap in the school system is probably the itinerant teachers operating in the regional support services for the Tomteboda School. Another source of information, which has only been paid limited attention are the recently formed low vision clinics attached to the health service eye clinics. One of the functions of the low vision clinic is to investigate the need for aids and provide the patient with the necessary training to be able to use his/her aids. In view of the differences in authorities and regulations governing the supply of aids, it is a matter of urgency that the forms of cooperation between the various supporting bodies in the school system and the health service are subjected to more detailed analysis. Von Bahr et al. (1977) reveal the great difference in the frequency of itinerant teachers visits between Sweden and Denmark which amounts to 3:28 a year. The same authors, and Lindqvist & Trowald (1970), also discuss the extra work involved for teachers. The latter report also demonstrates the tendency towards teachers receiving information that they will be having a visually impaired pupil in the class at an ever later point in time. Svensson (1978 a) points out that the shortage of itinerant teachers rebounds on the potential of pupils to utilize the technical aids in combination with the lack of facilities for further education of teachers who are to teach handicapped pupils. Division I of the special teacher course of training devotes far too little time to each individual handicap to actually form a basis on which to fall back on the day the teacher is faced with the situation of teaching handicapped pupils. Division II - visual handicap, trains so few teachers that they can hardly be expected to satisfy the need which exists.

At the moment, there is no organized course of in-service training for teachers who are to teach handicapped pupils, which must be considered a great shortcoming. From the report presented by the Tomteboda group (set up by the National Board of Education) and statements made in the budget proposals during the last two years, however, one may assume that the Tomteboda School will in the future be fulfilling an important function with regard to courses and in-service training.

Finally, Dahlquist discusses the need for parent education, which has been a priority area in the handicapped sector, and stresses that it is not only the sections of the courses imparting knowledge which are of importance but also the opportunities to meet other parents in a similar situation.

> The Committee shall inquire, without prejudice, into the matter of cost liability for staff assistance and the form thereof.

Research and development work has paid very little attention to the use of staff assistance for visually impaired pupils at school. Myrberg's work on the supply of information does provide a certain amount of data with regard to the assistants' work as readers. In a report dealing with closed-circuit TV systems in school, Svensson (1978 b) points out that the use of such aids may possibly reduce the need for staff assistance for certain partially sighted pupils.

> The Committee shall make comparisons between the need for resources for special schools and integrated schemes.

Elsewhere in the terms of reference, it is stressed that "the work of the Committee shall proceed on the assumption that the special school shall be retained as a separate form of school". We have seen earlier that the number of pupils attending the special school has fallen drastically over the last ten-year period. A precondition of being able to make any statement regarding the need for resources is that one has knowledge of which pupils will be taught in the respective type of school. Research is unable to answer this problem today. What research can answer in general regarding integration of visually impaired pupils would seem to be a small number of clearly defined problems. As has emerged from the presentation of various studies made above, a relatively large amount of work on the subject of resources has been done compared with other work relating to integration. The creation of these resources, however, can hardly be said to be founded on research and development activities and neither has research queried the appropriateness of these resources to any notable extent - researchers have rather contented themselves with noting that in many instances they are insufficient.

To sum up this section, one might say that all future research and development work concerning problems relating to integration of the visually impaired will expand our knowledge and our experience. Government committees of enquiry do not really resolve the concerns of research but they can have the advantage of indicating various problem areas and issues which are ripe for an input of research and development resources. A very general recommendation such as that all research and development on integration is worth encouraging and supporting is, in many instances, far too vague. At the same time, it is a difficult task to single out any particular issues as being more important than others. It may be mentioned that the Swedish Institute for the Handikapped, the National Swedish Board for Technical Development and the National Federation of the Visually Handicapped have taken the initiative to form a research team for visually impaired children and young people between the ages of 0 and 21 years. One of the goals of the team, which includes representatives of various public authorities and experts, is to catalogue, initiate and plan research and development needs and projects. To some extent, the preceding review of research and development findings and experience may be said to be "taking the bearings" of the current position of research and the list of some urgent topics for research and development below should therefore be seen only as a set of examples:

- Early identification, diagnosis and stimulation of visually impaired children must be regarded as an area urgently requiring work. In some respects, it is far too late to bring in special resources at the point when the child starts school.

- At the present time, we have extremely limited knowledge as to what happens in the classroom when visually impaired pupils are integrated. Knowledge of educational and social integration is incomplete above all in those cases where severely visually impaired children are integrated in the first year of school. Moreover, there are no longitudinal studies following the pupils through the school.

- The school - labour market or further education transition creates problems for many visually impaired people. The strategic role of the sixth-form college should be a particular subject for more in-depth studies along with schemes for a more planned type of education.

- Is the present "system of resources" in the form of itinerant teachers, coordinated special tuition etc., the most satisfactory and does this range of resources meet the needs of the visually impaired pupils within the different types of school? Is there any way of improving coordination of the resources available in the school system with the resources otherwise available to the visually impaired in society at large?

- The situation of pupils with multi-handicaps is not fully known to us and, in the long term, this group should derive the benefit of the corresponding research and development which has been carried out and will be carried out in respect of the "single handicap" group, as the multi-handicapped of school age are in numerical terms the largest group.

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PART IV Physically handicapped children

INTEGRATION OF PHYSICALLY HANDICAPPED CHILDREN INTO THE ORDINARY SCHOOL SYSTEM

Karin Paulsson

The reference group has met four times and has also served as an advisory body to the author.

The members of the group were as follows:

Birgit Dvoretsky, psychologist
Kerstin Fällström, psychologist
Ulf Lekemo, principal
Brita Sjöqvist, educational adviser
K-G Stukåt, professor

Birgit Dvoretsky and Eje Hultqvist, educational adviser, have contributed with progress reports on PRESS Projects nos 2 and 4.

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Note:

The term 'comprehensive school' is used to denote Swedish 'grundskolan', a blanket term for the years of compulsory schooling (7-16) covering primary, middle and senior levels but excluding the sixth-form college, used here to denote Swedish 'gymnasium'. No contrast with grammar school etc is implied for the purposes of this report.

1 INTEGRATION AND NORMALISATION

1.1 Integration, what is it?

At the present time in Sweden, we have a goal that physically handicapped pupils be integrated into school in ordinary classes as far as this is possible. Physically handicapped pupils are to take a natural place in the community of the school. These goals have been set forth by the National Board of Education in the Comprehensive[1] School Curriculum 1969, the National Board of Health and Welfare and the organisations of the handicapped, the Swedish Association for Motor-Handicapped Children and Young People and the Swedish Association for Disabled Persons (see also section 1.3).

The word "integration" is a catchword which is often used without thought to its meaning or closer study of the contexts in which it belongs. The concept of integration has been assigned varying content in different contexts. Authorities and researchers have defined the word in different ways and made divisions in different dimensions. Mårten Söder has given a detailed description of this in the introductory chapter. In its dictionary definition, the word "integrate" means to "unite different parts into a whole". In a figurative sense, one can thus say that individuals and environments (in its widest sense) should together form a whole which we call a social system. What form this takes, is determined by such things as historical tradition and cultural patterns and varies in different parts of the world. According to this way of seeing things, all individuals are integrated into an existing social system at the same time as society is modified in accordance with the demands placed upon it by its members.

This process of integration is seldom entirely successful in practice. There are many examples close at hand in contemporary, advanced industrial society. To what extent human beings should and can adjust to the environment or to what extent the environment should be adjusted instead are questions which are rarely settled by private individuals. The subject leads on to a political discussion which we are unable to go into in greater depth here. We may, however, note that if interaction between the individual and the environment

[1] See note after list of contents.

does not function in an optimal manner, the most frequent result is that the individual is rejected, i.e. segregated. This is what has happened to those people we today refer to as handicapped. In other words, a handicap is not something which is solely due to factors in the individual, but is also the result of shortcomings in the interaction between the individual and the environment. The reason why we "intergrate the handicapped into society" is today that they have been segregated in the past. We often make a division into different types of handicap. We talk of physical, social and mental handicaps.

It is important to stress that from the handicapped individual's point of view, integration is not an end in itself, but a means. To the individual, the goal is to develop and have the opportunity of utilizing his physical, intellectual, social and emotional resources in a meaningful way. In the case of handicapped children, the supportive measures which are expected to facilitate this process of development are usually called habilitation. School integration is thus a part of this larger process.

The above line of reasoning may seem laboured and academic but we wished to demonstrate to some extent how concepts such as integration, handicap and habilitation developed in the first place. It has also given rise to ponderings as to how problems associated with school integration should be framed and answered. Problems of the typ: "Has school integration succeeded or failed?"or "Which pupils can be integrated?" become less meaningful. The most appropriate expression of the problem should instead be "How is the physical, intellectual, social and emotional development of the pupil satisfied or impeded in different forms of school or types of class?" This question is not confined to pupils with physical functional impairments but can also relate to all school pupils.

In the introductory chapter, Mårten Söder has described the various dimensions given to the word integration, e.g. physical, functional and social integration. He also observes that physical and functional integration is the result of practical measures, whereas social integration is not something which can be effected by taking

administrative decisions.

In a like manner, we in our research team wish to view school integration as a means, a pedagogical-organisational measure, not as an end in itself. The overall goal should be to promote the development of the pupil's identity and personality. Along with the organisations of the physically handicapped themselves, the National Board of Education and the National Board of Health and Welfare, we are of the opinion that socializing and cooperating with non-handicapped pupils in integrated forms of education, (individual integration in an ordinary class or class integration in a class for the physically handicapped in an ordinary school or, as of 1978, a special teaching group) can stimulate the development of physically handicapped pupils in a positive direction.

But integration must take place on the handicapped pupil's own terms and must not merely amount to "adjustment". This means that decisions to take integrative measures must take into account the pupil's situation and needs such as the nature of the handicap, available resources, attitude of the pupil and the parents, etc. It also means that alternative models of integration need to be developed so that a choice can be made which meets the need of the individual pupil.

1.2 Normalization, a dangerous word

The term and the concept "normalization" have been used to denote measures taken to make the situation of handicapped persons as "normal" as possible in the sense of as similar to all others as possible. Bengt Nirje's normalization principle for the mentally retarded suggests that one should aspire to a normal daily rhythm, a normal weekly routine, a world of two sexes, respect for the handicapped person's own choices and wishes, normal economic standards and normal living conditions.

Unfortunately, the word normalization is often misinterpreted. The sense is distorted in an unfortunate manner to mean normalization of a handicapped person. We should therefore prefer that the word is not used at all. In most cases, it is more fruitful to describe in

specific terms what action is being referred to rather than to use the abstract word normalization.

1.3 Explicitly stated goals on the subject of integration of physically handicapped pupils

The Comprehensive School Curriculum CSC 1969 sets forth the aims and guidelines for the work of the school with instructions and comments. At various points in the text, questions regarding the natural place of handicapped pupils in the community of the school are touched on. The following quotations are taken from this:

> "Activities must be aimed at all the pupils in the school, a heterogeneous group of people, in the process of continuous development and representing different types of personality and talent. The school bears a special responsibility for those pupils who, for physical, mental or other reasons have difficulty with school work."

> "Every teacher . . . must also be familiar with the various types of physical and mental handicap which may impede the activities of the pupil at school."

> "The school shall create understanding of those groups who have special problems in modern society."

> "Special education forms an important element in the school's endeavour to create a method of working and a course of study which are adopted to the qualifications and needs of the individual pupil."

> "An aim for the education of pupils with difficulties at school is that these pupils should attend ordinary classes as far as it is possible."

"Analysis and assessment of the extent to which a handicap affects the total capacity of the pupil . . . must determine the nature and scope of the measures which should preferably be made use of."

"The fundamental condition of teaching being satisfactorily adapted to the individual pupil's capabilities is that the school individualizes its demanded on the pupils and an initial premise here is that it is not realistic in a school for all to require the same performance from everyone in a class. . .requirements with regard to learning shall be adapted to the capabilities of the individual. The pupil should receive help from the school to make the best of his capabilities regardless of the prevalent requirements and standards with regard to knowledge. Individualization within the framework of the ordinary class may need support from additional resources, e.g. in the form of coordinated special education, a pupil assistant, specially adapted teaching materials, etc. If the existing support is insufficient, the pupil may be offered schooling in a special class. This may be relevant for pupils who need very personal guidance; the security of a small group; educational - technical resources of greater scope; specially devised educational techniques including special functional and skill training, for example, and for pupils who have a need of many factors in the child's complex of problems and learning environment being kept under the direct observation of the teacher."

The National Board of Health and Welfare draft programme of action, 1973, emphasizes the goal of integration of physically handicapped children. "The goal is to provide physically handicapped children with the opportunity of being able to develop according to their own capabilities and to become independent, and to be able to realize the right to their own life, home, education, and work that all people have."

To attain this goal, an organisation is needed in which the following

functions must be coordinated

1. medical care, treatment and training
2. education at nursery school, comprehensive school and sixth-form college
3. housing and attendance service, and
4. social training

The programme of action presented by the Swedish Association for Motor Handicapped Children and Young People (Swedish initials RBU) states that the starting point for habilitation should be integration and decentralisation. The main reason for integration is to create contact between the physically handicapped and non-handicapped throughout the period of childhood and adolescence. The RBU emphasizes in particular that habilitation of physically handicapped children and young people is much more than medical habilitation. An active nursery school experience, a good school education, a secure but active home environment and enriching leisure are important parts of habilitation. Opportunities for early contact with non-handicapped children and young people is, one of the most important factors for an independent life in society. The RBU demands that resources for medial treatment be organized within all county council areas with the staff necessary for examination and treatment at the county level. A new type of thinking is necesarry so that the main principle is that the treatment team comes to the child and not vice-versa.

With respect to preschool activities, a strong wish is expressed for a nursery school consultant in each county council area who is to operate a play activities scheme in addition to her main duties as a consultant. Nursery school departments for physically handicapped children should be organized in connection to ordinary nursery schools for those children who are unable to attend an ordinary nursery school because of complex handicaps.

Even if the conditions are created, by means of wide-ranging decentralisation, for more and more physically handicapped children and young people to remain in the parental home during their school years, it may be necessary, according to the RBU to arrange for hostel

accommodation for certain periods for children who are unable to receive treatment and education in their home area. Pupil hostels should be designed to be as homelike as possible. The RBU is calling for small hostels which operate like a normal home and are situated in an ordinary residential environment seperate from the school and from treatment and training. Training should take place during daily school attendance. Ready access to recreational activities is singled out as an important factor. The RBU is requesting that small pupil hostels are set up in particular county council areas.

One of the RBU proposals on behalf of physically handicapped children with mental retardation is an improvement in cooperation between the boards for provisions and services to the mentally retarded and the habilitation organisation.

2 WHAT PUPILS DO WE REFER TO AS PHYSICALLY HANDICAPPED?

It is difficult to give a clear definition of what we shall refer to as physical handicap. Can the loss of the little finger of the left hand be classified as a phycical handicap, for example? The majority of us are probably inclined to reply in the negative to this question. But if the person is a violinist and uses his/her left hand to strike the notes, he or she is at least clearly physically impeded or handicapped in his/her profession. Thus we can state again that a loss of function should never be judged separately but always in relation to a situation or environment.

There are a number of definitions of what should be regarded as physical handicap. In the case of physical handicap, it is even more difficult than for other groups of handicap to find unequivocal dividing lines and objective, measurable criteria as to how the phycically handicap is to be defined. This probably accounts partly for the fact that the National Board of Education has not given any official definition of what is to be regarded as physical handicap in the school context. Since this article is about pupils, we present the definition used in practical work at the National Board of Education, though it has some shortcomings." As physically handicapped are regarded those pupils, who, as a result of their impaired motor function, need some kind of aid or adaptations of

the environment to manage in school." (There are physically handicapped pupils who do not have aids nor need environmental adaptations). Another operational definition used at the National Board of Education is: "Pupils to be found in the files of the consultants for the physically handicapped pupils." (No child may be registered, however, without the parents having given their approval).

The National Board of Education stresses that it is important that the schools do report physically handicapped pupils for registration to the total of 7 consultants for physically handicapped pupils who are workin within school system. These consultants, who are attached to the county education committees, participate in making decisions as to suitable school placements, discuss adaptation of the school environment, need for technical and educational aids, etc. Their whole work is based on close cooperation with nursery school, school, habilitation clinics, the National Centre for Educational Aids: physical handicap division, and with parents and pupils.

The annual registration of physically handicapped pupils conducted in schools since the 1972/1973 school year was voluntary up to and including the 1974/75 school year. Announcements were made in the "Current News" from the National Board of Education and forms were sent to the schools. In the 1975/76 school year, the demands on the schools were tightened up and this resulted in a highly increased number of known physically handicapped pupils in the country. By creating the posts of consultants for handicapped pupils in 1972 and later increasing the number of posts from 3 to 7 the quantitative registration and the qualitative input of resources for the individual handicapped pupils has improved rapidly in recent years.

2.1 Diagnosis and functional impairments

The group of physically handicapped pupils is very heterogeneous. Not only the degree of functional impairment but also the nature and the effects of the disability differ tremendously. Some physical disabilities, cerebral palsy, for instance, are caused by brain injury which often affects other parts of the child's functional ability as well, such as speech, perception, vision, hearing. Other diagnoses imply more

"genuine" motor disabilities. In this group can be mentioned the majority of muscular and nerve diseases, many malformations of extremities and disorders or disease of the joints. There is also a difference in the type of functional losses between different groups of diagnoses. Impairment of coordination, reach, range of motion or strength is a type of crude division which is often used. By simplifying one might say that cerebral palsy usually involves coordination problems, joint disorders and malformation of the extremities result in decreased reach and range of movement, while muscular diseases or paralysis due to spinal injury imply diminished strength and range of motion. Different types of physical disability require different forms of treatment and technical aids. In spite of the fact that the member of technical aids is greater than for other groups of handicapped, there is often a need for adjustments or completely individual solutions.

The distribution of diagnoses in children in comprehensive school, 74/75 school year is reported in the table below (Paulsson and Grip 1976).

Table 1 Diagnoses

Diagnoses	Percentage
Brain injury (mainly cerebral palsy)	48 % (41 % cerebral palsy)
Spinal injuries (mainly spina bifida)	13 % (11 % spina bifida)
Skeletal disorders, including malformation of the extremities and amputations	14 % (12 % injuries to the extremities) x)
Muscular and nerve diseases	15 % (7 % muscular dystrophy and atrophy of various types)
Joint disorders and deseases	6 %
Miscellaneous (e.g. coronary/pulmonary diseases, metabolic disorders and unspecified diagnoses)	4 %
Total	100 %

x) The malformation of extremities group comprises largely thalidomide children. They were born between 1959 and 1962.

In order to give a simple description of a physically handicapped child it is not sufficient to mention the diagnosis or the degree of functional loss. It is neccessary to include both of these variables in order to get at least some information of the child's functional ability. Children with the same diagnosis can be wheel chair bound or walking. By indication the diagnosis, one also gets an idea of some factors affecting the development of the child. Cerebral palsy, spina bifida (herniation of the spinal cord) and malformations of the extremities are congenital disorders or develop very early. Diseases such as muscular dystrophy and juvenile rheumatoid arthritis appear by preschool or school age. It is obvious that a congenital disorder might have a greater effect on the child's general development than one appearing later in life. By using a combination of the following variables: diagnosis, functional impairments with respect to mobility and hand and arm functions plus additional handicaps if there are any, it is possible to have a theoretical notion of a child's situation seen in terms of development and measures needed. How the child and the family experience their situation, however, we do not know (in the next chapter there is a more detailed description of what problems a physical handicap can entail).

In autumn 1978 there were approximately 3,100 physically handicapped pupils registered in the ordinary school system, approximately 2,600 in the comprehensive school and approx. 500 in sixth-form colleges. In a questionnaire survey of (in principle) all physically handicapped pupils at comprehensive schools and their teachers (Paulsson and Grip 1976) a description is given of the pupils' disabilities and the practical and educational back-up resources used in the school situation by pupils with different problems.

With regard to physically handicapped children and young people, it is known that the combinations of mobility difficulties and impairments in arm and hand functions are numerable. There are children, for instance, who are able to walk, albeit with difficulty, and who often have difficulty in using their hands (a form of diplegia), whereas others are completely confined to wheelchairs but have perfect arm-hand functions (paraplegia) and still others whose functions on one side of the body are sound (hemiplegia). A small group has an extremely and small limited capacity for overall movement (tetraplegia). With the

assistance of technical aids, even the latter group can acquire greater freedom of movement. Electric wheelchairs and typewriters controlled by sucking and blowing signals, doors which open or lights which turn on by remote control, are some examples of the sophisticated technical solutions available today. Here, however, it is important to insert a note of caution against too strong a belief in technology solving all problems. Many aids have certain shortcomings, despite their elegance and can rarely be used without the pupil simultaneously receiving personal assistance from someone. Correctly used, however, the aids fulfill an important function even if this does not always mean that the number of pupil-assistance hours, for example, can be cut.

2.2 Additional handicaps

Some disabilities are caused by brain injury, which can also affect parts of the child's functional capacity other than the motor aspect. Over one third of the cerebrally palsied pupils in the ordinary school system have different degrees of speechproblems, perception disorders, visual and hearing impairments (Paulsson and Grip 1976). In various studies (e.g. Bille and Hagberg, 1970) it is estimated that approximately 30 % of the cerebrally palsied have some form of mental retardation. Among these children, the additional handicaps are even more common. In children with spina bifida, which is primarily a spinal disorder, one quite often finds brain lesions caused secondarily by the flow of fluid between the spinal cord and the brain not functioning normally. By means of "shunt operations" immediately after birth, it is now possible to reduce the risk of brain injury. A decade or so ago these children would become more or less mentally retarded. In the case of children born today, it is possible using sophisticated operating techniques, to avoid this to a very large degree. In the previously mentioned study concerning school integration of physically handicapped pupils in the comprehensive school (Paulsson and Grip 1976), the following distribution of additional handicaps in pupils with various diagnoses is reported.

Table 1. Proportion of additional handicaps within various groups of diagnosis

	Percent	Notes
Brain injury (mainly cerebral palsy)	34 %	(most frequently perception disorders and/or speech impediments)
Skeletal disorders (mainly malformations of the extremities)	5 %	(principally visual or hearing impairments)
Spinal disorders (mainly spina bifida)	16 %	(mainly perception disorders)
Muscular and nerve disorders	8 %	(mainly speech impediments)
Disorders of the joints	4 %	

In total, over 1/5 of the physically handicapped pupils have one or more additional handicaps. Speech impediments and perception disorders are more common than visual or hearing impairments. In the case of physically handicapped pupils, it has been found that additional handicaps often constitute a greater problem than the physical dysfunction in the teaching situation (Paulsson and Marsk 1978).

2.3 Forms of school

The majority of physically handicapped pupils, approximately 80 %, are individually integrated in ordinary classes today. Many receive educational support in the form of coordinated special education and/or receive practical assistance from a pupil assistant and technical aids. Some have such slight disabilities that placement in another school has never been relevant.

Approximately 10 % of the pupils attend classes for the physically handicapped or special teaching groups for the disabled in ordinary schools. Some of the pupils are selectively integrated, i.e. they study one or more subjects with pupils in an ordinary class. Often this is a preparation for placement in an ordinary class. Although the number of pupils is low, 1/3 of the pupils in classes for the physically handicapped need additional support in the form for coordinated special education.

Approximately 10 % of physically handicapped pupils attend classes for the disabled attached to habilitation institutions. The pupils have no contact with non-handicapped pupils during the school day and are thus entirely segregated in their schooling. Classes for the physically handicapped of both of the above types are only to be found in a few major towns in the country. The number of pupils is very low, though there is a minimum of five pupils in the class. Classes for the physically handicapped are able to offer the highest level of individualised education. The pupils can study normal-length courses, but many study shorter courses. The division of courses by years is less pronounced than in ordinary classes. Treatment units with physiotherapists, and often an occupational therapist and speech therapist are always attached to the classes for the physically handicapped.

The proportion of pupils with severe physical handicaps and/or additional handicaps is considerably greater in classes for the physically handicapped than in ordinary classes, but there is no sharp dividing line and no clear criteria to indicate which pupils attend the different types of class. We find severely multi-handicapped pupils in ordinary classes and pupils with relatively slight handicaps in classes for the physically handicapped. There are many reasons which may be the determining factor in the individual case. See also chapter 4.

The majority of physically handicapped pupils opt to go on to sixth-form studies and nearly always attend schools in their home town as an integrated pupil. A small group of approximately 30 severely handicapped pupils attend the special national sixth-form college housed in the Skärholmen sixth-form college in Stockholm and some attend sixth-form classes at Bräcke Östergård.

3 WHAT PROBLEMS CAN PHYSICAL HANDICAP ENTAIL?

To attempt to define a major problem common to the physically handicapped is considerably more difficult than in the case of other groups of handicapped people. The physical handicap makes itself felt

in so many different ways in the life-situation and environmental factors, in the widest sense, play a considerably larger part than is the case for the hearing and visually impaired, for example. The main problems also vary from situation to situation. The teaching situation, for example, makes entirely different demands on functional capacity than the leisure situation, when the children wish to socialize with friends.

The major problem for a child with cerebral palsy such as diplegia is perhaps the teaching situation and/or the risk of being teased for his/her indistinct speech or manner of walking (often buckled at the knees and with uncontrolled movements). Children confined to wheelchairs with disorders such as paraplegia often have completely different difficulties. They are rarely bullied and cope well with the teaching situation, but perhaps have difficulty in accompanying their friends on their exploratory outings, visiting them at home, getting into cinemas and sports stadiums, etc. Thus the environmental obstacles are the major barrier in their case.

A general "problem" of a completely different nature is that work with the physically handicapped children calls for collaboration between many different experts so as to throw light on the total situation of the child from all angles. This makes work time-consuming and unwieldy but is necessary to achieve good results.

Physical handicap naturally impedes school work in various ways. But it is often not the physical handicap per se that constitutes the main problem. Additional handicaps, e.g. speech impediments or the absence of speech, visual and hearing impairment, intellectual handicap, perception and behavioural disorder - call for individual measures. There are therefore rarely any patent solutions to the educational problems.

Late social and emotional maturity, which can be a secondary effect of physical handicap, can also cause difficulties at school. If we confine ourselves to the problems in the school situation, there are certain factors which can constitute problems. Some relate to the child's physical disorder and the possible effect on his/her development. Other problems are to be found in the physical, educational and/or social environment. Some of the difficulties can

be eliminated entirely, some can be reduced, and finally, there are others which we lack the methods to combat today. A functional impairment in a person does not of itself say anything about the degree of handicap. It is in interaction with the environment or in relation to a situation that the individual can become more or less handicapped.

Below, we give examples of some of the factors that can sometimes, but not always, constitute problems for the physically handicapped children (a detailed and easily read description of different physical handicaps and their effect on the child's development is given in a book entitled "The Physically Handicapped Child and the Family" by Kerstin Fällström, Anders Möller and Erling Nyman, see references in chapter 6).

3.1 Physical impediments

3.1.1 Difficulties caused by the child's physical functional impairments

Physical disability, visual impairments, hearing impairments and perception disorders can constitute impediments to the natural development of the child. They make it more difficult for the child to investigate his world spontaneously and thereby acquire a variety of experiences. Post-operative conditions and plastering can also reduce freedom of movement for a short or longer period of time and have the same effects.

The chances of the child becoming independent and developing physical independence can also be restricted by the physical disability and other functional impairments. This can impede the development of social and psychological independence (Homburger-Ericson,1973).

Other types of difficulty can also arise in association with the child's physical handicap. Some severely physically handicapped children need help in turning in bed sometimes several times a night. Lifting and carrying the children along with their often heavy aids calls for strong arms and backs. The purely physical burden of care and the lack of opportunity for relief for the parent can affect the whole family situation in a negative direction in certain cases.

3.1.2 Impediments in the physical environment

Examples of this type of impediment are stairs, thresholds, kerbs and means of transport which cannot be used by the physically handicapped, inappropriately designed housing and schools, poor technical aids, etc. The list of this type of impediment could be any length. Many of them can be eliminated entirely by adapting the environment, for instance. Various legal enactments, e.g. the building byelaw section 42 A, have produced action in this field. Transport to school by taxi or special bus is another form of assistance that is frequently used.

3.2 Educational difficulties in the school situation

3.2.1 Problems ensuing from the child's functional impairments

Certain types of brain injury give rise to learning difficulties of different degrees and kinds (e.g. Kristensen, 1972). Perception disorders and deficient powers of concentration and application are examples of this type of learning impediment. Hearing and visual impairments along with speech impediments or the absence of speech also give rise to certain types of educational difficulty.

It is probable that not only brain lesion but also lack of experience of the world around as a result of severe physical handicap can produce what we refer to as perception disorders.

3.2.2 Impediments in the educational environment

Where the teacher lacks the knowledge as to how learning may be facilitated for children with the above difficulties, a further educational impediment is created. The same is true if the teacher finds it difficult in his working situation to apply educational methods and procedures so that all pupils are given adequate stimulation according to their individual requirements. The reasons may be that one has large and perhaps unruly classes or many pupils who need an exceptional amount of individual assistance for a variety of reasons.

A pupil's need for a slower rate of study than the ordinary school year may sometimes be difficult to meet in the ordinary class.

The division into courses by year with a course content determined by the curricula might be an educational impediment.

3.3 Psychosocial problems

Psychosocial impediments include all those factors having a negative effect on the child's process of socialisation and in his/her interaction with others. In more specific terms, we are referring to problems which may arise when the child endeavours to develop physical and mental independence but is impeded by his/her physical limitations and/or by his/her parents being far too expressly overprotective (Fällström, Möller and Nyman, 1977). Overprotection is often caused by the parents not having fully worked their way through the crisis which normally occurs when they are informed of the child's disability (Cullberg, 1975).

The child's image of himself is largely formed through others' view of the child. The possibility of developing a positive self-awareness and identity is exacerbated if the child encounters denigrating or negative attitudes in his environment, which then influence his/her self-concept. Particularly children with ostensibly slight physical handicaps are often subjected to teasing by other children or adults underestimating their problems (Paulsson and Marsk, 1978).

Intensive periods of training and long hospital stays can also cause a delay in emotional and social development.

It is important that the child is afforded the opportunity as early as possible of playing with other children (as far as this is realistically feasible) on terms which are as equal as possible. The majority of physically handicapped children attend some form of preschool activity today. Adapted play areas both indoors and outdoors and suitable mobility aids for outdoor use are important factors which, unfortunately, are in very short supply in the case of preschool children with severe physical handicaps.

Additional handicaps in the form of speech impediments and hearing impairments can constitute problems in relations with friends both in the school situation and during leisure time.

A physically handicapped child who has founded good social relations with the world around him at an early stage and developed a positive self-concept with a realistic view of him/herself incorporating both the assets and deficiencies of personal equipment has great potential for coping with the demands made at school and in social dealings with his/her peers (King, 1971).

Children with progressive diseases and their families are subjected to extremely great emotional difficulty. Seeing the child become worse and worse and knowing that the disease is progressing is trying for the whole family. After all many come through this but some cannot cope mentally and/or physically.

3.4 Cultural impediments and prejudices

Deeply rooted prejudice and tradition ensuing from segregation and rejection of certain groups also constitutes a form of impediment which is closely allied to the psychosocial impediments. They obstruct insight and understanding, for instance, of people with handicaps and of the measures which may have to be taken on behalf of these persons. The cultural impediment also often results in psychosocial impediments. The fact that evil people in literature and on the screen often adopt distorted physical positions or facial expressions, have artificial arms or legs, are hunchbacked (scoliosis) etc. has undoubtedly coloured many people's feelings on first encountering physically handicapped people in real life (Siller 1966).

3.5 Administrative and organisational impediments

Examples of organisational impediments may be special legislation and other impediments which single out people with handicaps. Division of official responsibility often creates problems of coordination and discussion as to division of responsibility between government, county and local authorities. It may, for instance, be a question of demarcation between the medical rehabilitation for which the county council is responsible and the school activities, where the local authority is the body in charge. Different supervisory authorities for nursery school and ordinary school (the National Board of Health and Welfare and the National Board of Education) can produce other problems of coordination. These problems are of current interest and discussion is being conducted in various

quarters as to how good solutions can be found.

We noted earlier that it is most fruitful to discuss concepts such as school integration in their various forms in terms of their potential for satisfying the pupil's needs for development in various respects. For some physically handicapped pupils, the total number of difficulties is so great and/or of such size that one might query whether school integration in its present form is the best way to total habilitation. Ultimately, it must be the individual pupil and his/her parents who decide what is best.

The individual pattern of how a pupil and his/her environment interact is complex and often difficult to analyse. If one or more factors in the individual him/herself or in the environment are altered, this may represent a complete change in the total situation of the pupil. It is important never to study one variable as an isolated unit. One must always look at the whole individual-environment constellation. We may have hypotheses or results of earlier research as a basis for assumptions as to the significance of various factors in relation to each other, but the only thing we are able to verify with any certainty in the individual case is the result of interaction between individual and environment. The various factors act as input variables which we use as models for interpretation and explanation.

4 WHAT DOES RESEARCH SAY?

Integration of physically handicapped pupils has proceeded at a rapid rate over the last 10 year period. A number of interesting studies focusing on a variety of sub-areas of the period of integration have been conducted. Since there has been an expansion of various school and social resources over the years, some results of older studies are scarcely relevant today. It may also be assumed that the results of new studies will quickly become obsolete, when the new SIA school system is introduced[1)].

[1)] SIA is short for "skolans inre arbete" which means "the internal organisation of school activities". The goal of the SIA reform is to create a more stimulating school environment. In order to meet the needs of different pupils better, particulary the "exceptional" pupil, SIA recommends a more flexible organisation of groupings of pupils, teamworking staff, and more opportunities for contact with organisations and activities in society at large.

Due to lack of time and space, we shall confine the remainder of our presentation to Swedish studies concluded post 1975 dealing with the situation in nursery school, comprehensive school and sixth-form colleges. The main emphasis will be on the comprehensive school.

4.1 "Pupils in classes for the physically handicapped" by Briedetis, K., Landström, B. and Norlin, G. 1976

The study has been conducted as a special work on a course dealing with handicapped problems at the Department of Education at Uppsala University. Supervisor was Sven Amcoff.

The principle object of the study was to study and evaluate classes for the physically handicapped. The investigation comprises various different suggestions:

1. Listing the number of special classes and the number of pupils in these classes and describing changes over a 10-year period.

2. A description of what the class for the physically handicapped looks like, based on the results of a teacher questionnaire sent out by the Association for Education for the Physically Handicapped

3. Analysis of any changes in the pupil population in classes for the physically handicapped at the Folke Bernadotte School over a 10-year period by way of a teacher questionnaire.

4. Investigation of any differences in physically handicapped pupils in a class for the physically handicapped compared with those who are individually integrated, with regard to the nature and the degree of special needs and attitudes to the school situation.

The research method used was teacher and pupil questionnaires to 26 pupils and teachers (15 from a class for the physically handicapped in Uppsala and 11 individually integrated pupils in Örebro). The pupils attended middle school or senior level classes.

The main results of the respective sections of the study are in brief as follows: the number of pupils in classes for the physically handicapped (including special and training schools) has been relatively constant over a 10-year period. Class divisions, however, have increased with fewer pupils per class as a result.

On the basis of the FUR questionnaire, it can be demonstrated that the number of pupils in classes for the physically handicapped decreases at each level of the comprehensive school. 63 % of the pupils in classes for the physically handicapped are boys. The average number of pupils in a class for the physically handicapped is 5.9 in total (5.8 at the primary level, 5.4 at the middle school level and 7.6 at the senior level of the comprehensive school). Over half of the pupils have physical disabilities resulting from brain lesions.The class for the physically handicapped is composed of pupils, the majority of whom need both technical, staff and educational support.

The pupil population at the Bernadotte School has changed character since 1966. Previous to this, the majority of pupils had cerebral palsy, but, at present, approximately half of the pupils have other disorders. A variety of the pupils' functions are better today (mobility, certain ADL functions, speech, reading, writing ability, ability to cope without a specially-adapted work-place, perception, vision and hearing and performance compared with the level in an ordinary class).

From the results of the pupil survey, it emerged that half of the 15 pupils in the class for the physically handicapped in Uppsala would prefer to be individually integrated, whereas the remainder are happy in the class for the physically handicapped. The 11 individually integrated pupils in Örebro are all satisfied with their school placement. Approximately half of the physically handicapped pupils are of the opinion that they receive too much help from the pupil assistant. 18 of the 26 pupils have repeated one or more years at school, all except 1 at the primary level. None of the 26 pupils consider that they have great difficulty in following teaching. The coordinated special teaching is not used particularly much and cannot be shown to be more common among the individually integrated pupils on the basis of the results of the study. All 26 receive physiotherapy or some other form of physical training.

The differences as regards the nature and degree of handicap were relatively small between pupils in the class for the physically handicapped and the individually integrated pupils.

PRESS

PRESS (Swedish initials for a project entitled the Situation of Physically Handicapped Pupils in Society) is a multi-institutional and multi-disciplinary research programme initiated by the habilitation team at Bräcke Östergård. The PRESS programme directors include people who work in various sectors of habilitation, representatives of public authorities, handicap organisations and researchers.

PRESS sees its function as one of stimulating researchers and staff within the various habilitation sectors to use scientific means and methods to bring problems to the fore, test hypotheses and make use of experience gained with regard to the situation of the physically handicapped pupils at school and also at the ages prior to and immediately following school age.

4.2 Project PRESS 2: "evaluation of development programme for physically handicapped children in nursery school"

The project commenced in the autumn term of 1976 and is to continue into June 1979. The project leader is Professor Karl-Gustav Stukát and the project assistant is Birgit Dvoretsky, a psychologist. The following is a presentation of some provisional results.

Aim: The aim of the project is to see whether special training in nursery school can eliminate or reduce learning difficulties which many physically handicapped children prove to have at school, primarily in Swedish and mathematics.

Method: During frequent visits to nursery schools, observation has been made of the physically handicapped children's adjustments in peer groups and their development along with the opportunities for training offered by their stay in nursery school. 40 children in western Sweden have been studied. Half of these were attending ordinary nursery schools at the start of the project, and half special nursery schools for physically handicapped children. The children were between

the ages of 3 and 6 when the study commenced. In recent years, it has become more and more common for physically handicapped children to be integrated in local authority nursery schools and at increasingly younger ages. Even children who start at a special nursery school are often transferred to an ordinary nursery school - usually the year before starting school proper.

In order to obtain broader information as to how integration is functioning at the present time, the project has sent out a questionnaire to some 60 nursery schools with integrated physically handicapped children. These 60 physically handicapped children have all, at some time during the 1978 school year, been admitted to Bräcke Östergård's nursery school department for examination and/or treatment. The questionnaire relates to the situation as of the autumn term of 1978. Results of the questionnaire survey:

The children were between the ages of 1 and 7 years. Two-thirds had the diagnosis of cerebral palsy, whilst 15 % had herniation of the spinal cord.

Approximately one quarter of the children are able to walk by themselves whereas the remainder has a need for some form of aid at nursery school such as a rollator, a special cycle, a wheelchair or a walking-frame.

Approximately one third of the children have no speech and thus lack the capacity for verbal communication with friends and staff.

The physically handicapped children are mainly placed in full-time nursery school (day care centres). Close on half attend sibling groups, one third attend day care centre groups divided by age, and some attend part-time groups. Three of the children attend a special group which is integrated into an ordinary nursery school.

The size of the group varies between 4 children and 25 children, the most common being 14 - 16 children (one-third of the children attend the groups with this number).

The staff ratio varies enormously. The number of children per adult varies from 1.4 to 10.0. The most common staff-child ratio is 3.0 - 3.8. All categories of staff - nursery school teachers, children's nurses, relief workers, assistants and trainees - are included here in the total number of staff. More than half of the children have an assistant. Approximately an additional quarter are in need of an assistant in the opinion of nursery school teachers.

The majority of the assistants share in all duties of the nursery school group and therefore constitute an additional staff resource. Only a few spend their time exclusively on the physically handicapped child, his/her care and training.

The number of children is reduced in just less than one quarter of the groups as the result of the physically handicapped child being placed there.

Most physically handicapped children attend nursery school five days a week, whereas others attend 2 - 4 days per week.

More than half of the children come by taxi to nursery school or use special transport laid on for the children.

Close on two-thirds of the nursery school teachers considered that they had not received sufficient information about the child before the child started nursery school.

In virtually all preschool groups, the staff has received further information about the physically handicapped child after the child's placement in the group. The information has been supplied by district physiotherapists, parents, the local habilitation team, Bräcke Östergård, etc.

Approximately one third of nursery school teachers report that they still do not have sufficient information about the physically handicapped child. They lack information about suitable training and want specific advice regarding training. They wish to have details of the physically handicapped child's potential, what demands they

can make of the child, and information about how the handicap affects the child psychologically.

More than half of the physically handicapped children (60 %) have roughly the same contact with friends as the other children, whereas close on one third have worse contact than other children or are very isolated. In the latter group, the majority lack the capacity for verbal communication. Three-quarters of the physically handicapped children are reportedly able to take part in the other children's activities. Approximately half of all physically handicapped children, however, are worse than other children in the group at drawing, painting, puzzles, group games and role playing.

Two-thirds of the physically handicapped children need additional educational training and in 33 of the 40 preschool groups there is time and opportunity for training of this type.

Many of the physically handicapped children receive regular visits from a physiotherapist in nursery school, some from remedial teachers and a few from both of these categories of staff.

A speech therapist and a sign language teacher each visit one child in the nursery school. Less than half of the preschool group has regular contact with a play centre.

Discussion: The replies to the questionnaire show that, in the majority of cases, the physically handicapped child's stay in the preschool group is regarded as a positive experience by both children and staff. The other children's parents, with only the odd exception, have expressed positive comments about the physically handicapped child's placement in the group.

During the numerous visits to the approximately 35 preschool groups, in which the physically handicapped children taking part in PRESS 2 are integrated and at seminars for nursery school teachers with integrated physically handicapped children, the same positive attitude to integration has emerged. It is only in those cases where the physically handicapped child has required a great deal of attention due to additional handicap, and has been disturbing at the same time, that integration has been felt to be a negative experience by preschool staff.

There is, however, a great need for information and training of preschool staff in matters concerning handicap and special education.

4.3 PRESS 3: "School integration of physically handicapped pupils in the comprehensive school"

by Paulsson K, Grip L and Marsk, C. 1974-78

Aim : The aim of the study was to study how different forms of school integration satisfy or impede the medical, educational, psychosocial and environmental needs of the physically handicapped pupils. The intention was to reveal the differences, if any, between an ordinary class, a class for slow learners and a class for physically handicapped in an ordinary school, a) with regard to educational, technical, functional and treatment resources and b) with respect to the psychosocial environment during school and leisure time.

Method: The study was conducted in two phases, a questionnaire section and an interview section. The questionnaire section comprised all registered physically handicapped pupils - parents and teachers of these pupils. The principle aim is to provide a total picture of the population of physically handicapped pupils in the form of a quantitative description. The questionnaire section also incorporates pupils in classes for the physically handicapped at institutions, i.e. completely segregated pupils.

In the interview section, many of the issues recur but have been gone into in more depth and been given a more qualitative and analytic description. The interview section comprises personal interviews in the home and school environment of approximately 200 physically handicapped pupils and parents and teachers of the pupils (86 physically handicapped pupils in ordinary classes, 48 in classes for the physically handicapped integrated in an ordinary school and 64 in classes for slow learners). Questionnaires were sent to 30 headmasters of individually integrated pupils.

The study has attempted to shed light on the majority of aspects which have proven to be of interest in connection with integration of physically handicapped pupils from previous practical experience or studies. Both of the reports which have been published describe: the decision-making process involved in choosing school placement, pupils' previous school situation (with questions about late school start, change of type of class and "retention" in the same class) adaptations of the environment and need for assistance including help from a pupil assistant. Also described is the teaching situation of physically handicapped pupils and their attitude to this. The teacher's teaching situation, the situation for other pupils in the class, the role of the pupil assistant, training and treatment facilities, absence from school due to illness, training or treatment, the pupil's friendship ties at school and during leisure time and the family situation. The supply of information and attitudes to this plus the school's contact with child habilitation, etc. are also described.

The headmaster questionnaires provide data on information, financial and administrative matters relating to conversion of buildings, purchase of aids, salaries to pupil assistants, etc., and the views of the headmasters on integration of handicapped pupils.

As the study is the most comprehensive conducted in recent years in Sweden and, moreover, summarizes the knowledge and experience of children, parents and teachers on the subject of integration of physically handicapped pupils, we have allowed ourselves to set aside additional space for it in the text.

Results: To present the data in a few pages is impossible and instead, we have chosen to reiterate the final discussion which is largely based on the facts uncovered by the study.

Discussion of the external environment in schools: A few years ago, it was not uncommon that pupils confined to wheelchairs were placed in a class for the physically handicapped far away from home due to the fact that schools in his/her home area were not suitable for wheelchair users. According to the results of the study, the situation has changed very rapidly in recent years. Today, the physical

handicap in itself rarely constitutes a problem which cannot be coped with in schools near home. It could therefore be said that physical facility integration has been implemented in the main, even if minor environmental impediments are still to be found in certain places. It happens, for instance, that physically handicapped pupils are unable to get to commonrooms during breaks and free periods or to certain areas of the school in order to see friends in other classes.

The need for technical aids and school transport also seems to be met in principle. It is a common experience, however, that the machinery does not always run smoothly. Late delivery of aids, administrative difficulties in the decision-making process, school tranport which is unpunctual, etc., are not uncommon.

Discussion of the educational situation: Many studies in the past have investigated how different forms of teaching affect school achievement. None of these is directly concerned with physically handicapped pupils. Since it is to a very minor degree the actual physical handicap itself, but primarily learning difficulties resulting from brain lesions which affect the educational situation, the results of these studies should, nevertheless,be of some value. The majority of the studies concerned with retarded pupils show that these pupils perform just as well or better in an ordinary class in academic terms compared with in a special class (Johnsson 1962; Österling 1967; Stangvik 1970 etc.). The reason is thought to be that they are intellectually stimulated by the other pupils in an ordinary class, whereas the stimulation is lower in the special class. Stangvik found that pupils performed better when they had all their education in a normal class than when they got various forms of auxiliary instruction. Bjöersdorff (1972) found that pupils with reading and writing difficulties performed slightly better at reading in a reading clinic (receiving other tuition in an ordinary class) than in a remedial reading class.

On the basis of the results of our study, it is not possible to draw any conclusions as to which type of class is best in academic terms and neither has this been the aim. Below, we instead discuss the potential offered by the various types of class to satisfy the pupil's needs in the teaching situation.

From the results of the study it emerges that the teachers's training and experience of physically handicapped pupils differ markedly. The majority of the teachers in ordinary classes and classes for slow learners have not previously had a handicapped pupil. Many of them lack special teacher training. Despite this, one finds strikingly few who report having difficulties with actual teaching method vis-á-vis the physically handicapped pupil. If there are problems these often relate to the fact that the number of pupils is high (in an ordinary class) or that many other pupils in the class need individual attention. This makes the teacher experience that he/she cannot manage to cater for the needs of the physically handicapped pupil in the manner that he/she would wish..This type of difficulty is even more pronounced in the class for the physically handicapped despite the fact that the number of pupils there is very low. Heterogeneity of age and intellectual capacity is greatest in these classes and, in principle, each pupil needs fully individualised education, which according to the teachers, is often difficult to implement in practice. Further support for this is that almost 1/3 of the pupils in the classes for the physically handicapped receive clinic tuition (as a rule as the only pupil) supplementary to class tuition. Many of the teachers of classes for the physically handicapped also take the view that the pupils receive far too little stimulation from each other. Their severe handicaps, often including speech impediments and hearing impairments, result in difficulties in implementing socially important training in functioning and working in a group situation. The whole teaching situation risks becoming far too individual-orientated. The educational advantages of specially trained teachers, often with several years experience of physically handicapped pupils and the facilities for a large element of individualised rate of study must be seen in relation to certain aspects of a negative character from an educational viewpoint.

In addition to the external differences in educational terms, it is important to study the pupil's experience of his/her situation. The results of the study show that, in recent years, there has emerged a group of pupils who began in an ordinary class, but after one or a number of years are transferred to a class for the physically handicapped, and, in the past, to a class for slow learners as well. Many of these pupils' parents have given as reasons for

this not only the need for more educational assistance but also psychological causes such as difficulties in functioning in a large group or the mental strain of always feeling that one is the worst. The question one then poses oneself is: "Are the resources of the ordinary class insufficient?"

It is obvious that resources are needed to aid these physically handicapped pupils. It is perhaps less obvious to study the attitude held by teachers, parents, the pupil etc. to schooling. Is it very achievement-orientated and does it primarily stress the acquisition of knowledge? What view is taken of the school's socially educative and stimulating role in relation to the acquisition of knowledge? What expectations does the teacher have of himself in his professional role with regard to this pupil and what demands are made on the teacher by others in this respect? It is not uncommon that the ambitions with regard to physically handicapped pupils with brain injury are far too lofty from various quarters. For many years, there has been excessive faith in educational supporting measures which has also resulted in rising expectations of performance. This, plus an overemphasis that theoretical knowledge is extremely important to people with a physical handicap has influenced expectations and requirements of both teachers and physically handicapped pupils in an unfortunate manner. It is widely thought that only intellectual occupations are conceivable for physically handicapped persons. Today, possibilities are open for adapting both places of work and duties at work even within the more predominantly manual occupations. The shortage in supply of work for the physically handicapped is governed by many different factors and will not be solved by means of traditional education and training alone. We should not detract from the importance and the joy of mastering certain basic skills even in the case of those who have extremely great learning problems, but it is unfortunate if pupils are pressed towards a level of achievement beyond their capability.

The increase in individual integration in normal classes and classes for slow learners has had effects on the composition of the class for physically handicapped. The declining pupil population of these classes has resulted in consequences contributing further to a selection of pupils. As local expansion of school resources has increased and all

the more physically handicapped pupils have had the opportunity of attending a school near their homes, the classes for the physically handicapped have had to admit pupils with the greatest difficulties at school. As the student population has fallen, the authorities have been forced into grouping together pupils from several different years into one class. Today it is very common that pupils who were previously regarded as belonging to the special school are now integrated in a class for the physically handicapped, which can be a positive experience in many respects for the physically handicapped pupil. From an educational viewpoint, this entails certain problems which have been described earlier in this article. Another effect is that the class for the physically handicapped has become less and less attractive as an alternative among many physically handicapped pupils. They often feel this disadvantages to be greater than the advantages. Moreover, the values of the physically handicapped pupils themselves are also coloured by the negative attitude to mental handicap prevalent in society at large. This emerges from the studies, even if the authors have refrained from quoting this kind of statement in the report.

Discussion of treatment and training resources in various types of class: Each individual county council is to ensure that physically hancicapped pupils receive the training and treatment they are in need of. Unfortunately, the financial and/or staff resources are not always sufficient and the situation varies in different county council areas. A few years ago, the availability of training facilities was sometimes a strong reason for choosing a class for the physically handicapped for pupils who lived in places where resources of this type were unavailable or were far too difficult to make use of (because of the time or distance involved). In recent years, these resources have been expanded in county council areas but much remains to be done.

At the same time, there has been something of a shift in emphasis as regards the goal of child habilitation. A greater stress on the child's psychosocial development has meant that the importance of physical training has been toned down to some extent. Moving away from home to attend a class for the physically handicapped with good facilities

for physiotherapy and speech training is usually judged differently today than it was 10 years ago. The changes in goals are related to the fact that the starting point today is from the individual as a whole to a greater extent than it was in the past. This has also produced more and more coordination between different aspects of habilitation. Today, the concept of total habilitation is the most relevant one.

This trend has meant that the work of certain occupational groups has changed to a greater or lesser degree. Physiotherapists and occupational therapists whose work took place entirely at hospitals and possibly in the child's home in the past, now also go to schools to discuss adaptations of buildings, procurement of technical aids and to provide information about the physically handicapped child. Forms of cooperation between child habilitation, nursery school, school and the consultants for physically handicapped pupils have been developed.

The results of the studies show that the availablity of physiotherapy and speech training for pupils attending various types of class, is, as expected, greatest in classes for the physically handicapped. These pupils also have more training time per week than pupils in an ordinary or remedial class. According to pupil-parent assessments the majority consider that the pupil has sufficient training. There is, however, a relatively large group of pupils in all types of classes who are of the opinion that they do not receive a sufficient amount. In ordinary classes and classes for slow learners there are also pupils who receive no training at all despite the fact that they consider they are in need of this. Even though the differences have diminished, the greatest amount of resources are still to be found in the class for the physically handicapped. In accordance with what has previously been said about the goal of total habilitation, there are no sound criteria as to how much physiotherapy may be said to be appropriate in the individual cases. Some pupils prefer to expend more energy on school work, for instance, and/or contact with friends during leisure time, and choose to cut down on the time given to physical training. Others

perhaps take part in riding, swimming, sport for the disabled, etc. and get fitness and strength training in this way.

It has often been asserted that the class for the physically handicapped is needed for pupils who have long, frequent bouts of illness or who undergo long hospital stays for various reasons. These pupils are said to have a need for an individual course of studies on medical grounds (possibly in combination with learning difficulties ensuing from brain injury).

This may be true of individual pupils, but as a group there is nothing to indicate that pupils in a class for the physically handicapped at an ordinary school are more susceptible to illness than those attending other types of class. With respect to absence from school due to periods spent in hospital, the pupils in the class for physically handicapped have the lowest rates of absence. They normally receive their treatment and training through the school whereas some pupils in the other types of class have to be admitted to hospital. In many cases, it would therefore seem to be differences in local resources which determine whether treatment can be handled on an out-patient basis or not.

Discussion of the psychosocial environment in various types of class:
It is difficult to find homogeneous criteria for what form the psychosocial environment should take. The replies to questions concerning attitude as to how different types of class are regarded show that what some feel to be an advantage may be conceived of as a disadvantage by others.

Being able to feel competent in a class for physically handicapped is judged to be important by some pupils, whereas others, even accept being the worst if they are allowed to stay in an ordinary class close to their home together with children from the same area. The small class for physically handicapped with handicapped pupils only is viewed as an excellent, secure environment by some but as cut-off and non-stimulative by others. Only having handicapped classmates is felt to be natural to some, whereas others regard it as discriminatory. It must be the needs of the individual pupil which determine what is the most suitable environment.

The pupil's needs and view of his/her situation are influenced to a large degree by the values of others. If the school and/or parents lay too great an emphasis on school achievement, it may be difficult, for instance, for the child to accept problems in studying. As mentioned earlier, one often finds in parents and even teachers great anxiety and concern for how the child will cope in adult life if he/she fails with his/her studies. If the pupil then has learning problems it is probable that the pupil will be transferred to a special class on both educational and psychological grounds. The same type of child in another environment with other values would perhaps be best off attending an ordinary class receiving various kinds of support. If one can assume that results of studies which relate partly to other groups of pupils also hold good for physically handicapped children with brain injury too, it is not certain that school achievement would be worse in an ordinary class. No follow-up has been made to date on how severely physically handicapped pupils with brain lesions cope academically in different forms of school.

It sometimes happens that physically handicapped pupils are unable to cope with all the demands made on them. It is important to stress that this is an effect of interaction between the child and his/her environment and is not only contingent on factors in the child. Considering the total number of demands made on many handicapped children it is absolutely fantastic that most of them do cope after all. Some examples of these demands are: acceptance of the physical limitations and possibly also a different appearance, time and energy to take part in physiotherapy, mental strength to cope with the reactions and questions of others when faced with a handicap, the wish but not always the ability to take part in friends' games because of the handicap, adjustment to periods spent in hospitals, motivation to use orthoses or splints, etc. which sometimes get in the way when playing and sometimes press and chafe. The list could be made much longer. Most of these demands cannot be eliminated - the children have to learn to live with them. The fact that not everyone can put up with this at certain periods

of their development or more permanently must be accepted. In some cases, it is immediately noticeable that a pupil cannot cope with the strain, for example if she or he is strikingly anxious or downhearted. In other cases, the background may be exactly the same but the pupil acts in a nonchalant or indifferent manner or is aggressive and disrupts lessons. There is a risk that the latter are erroneously classed as spoilt and undisciplined, which may mean that the situation worsens for them.

If the situation becomes too much of a strain, the pupil may need a school environment which makes less demands and where he or she is able to feel greater security. Both the class for slow learners and, in particular, the class for the physically handicapped have proved to be able to function as this kind of refuge. The low number of pupils, the companionship of others who also have difficulties and facilities for more individual assistance and support are resources which the ordinary class cannot always offer in practice.

In summary, we might state that all types of class seem to have specific qualities as regards the psychosocial environment. In some instances, these are felt to be positive and in others negative. We hope that the new SIA school will be so flexible that the total school environment can be adapted to the needs of the individual pupil to a greater extent than is now possible with the division into fixed classes.

Discussion of how the needs of the pupil are weighed against the financial, staff and organisational resources of the school:
The general impression gained from the results of the interviews is that school integration of physically handicapped pupils has worked extremely well. Some problems still remain to be resolved but the majority seems to be agreed that the policy is the correct one. Pupils, parents, teachers, headmasters and others all have the will to work hard to make it a success.

With regard to financial investment, the schools seem to have met the needs of the physically handicapped pupils in virtually all cases. Adaptations of the environment, procurement of technical aids, employment of pupil assistants and special school transport have been put through where there has been a need. Only exceptional wishes have not been possible to comply with, for instance installation of a lift in a few cases and conversion of all sections of the school buildings. Some parents and pupils also want an expansion of the assistant scheme. Whether the school considers that these pupils do not need more help from assistants or whether the reasons are economic is difficult to determine.

With regard to staff resources, it is noted that many teachers in ordinary classes and classes for slow learners lack special teacher training. In an ordinary class, there has rarely been a need for this. With the SIA school model with teams of teachers being jointly responsible for teaching a large group of pupils, more and more teachers will be encountering pupils with various types and degrees of learning handicap. Some form of in-service teacher training will then be necessary. It may be organised in various ways but in-service training advisers and consultants for physically handicapped pupils will probably form an important part of it. They can give advice and directives appropriate to the actual situations. Educational consultants for the physically handicapped and the visually and hearing impaired are currently discussing how to coordinate what is sometimes their joint work. Certain organisational matters must be resolved, for example. The consultants for the physically handicapped are attached to the county education committees, the consultants for the visually impaired to the Tomteboda special school and those for the hearing impaired to the county councils. By expanding teacher training, the educational situation can be improved to a greater extent for both teachers and pupils.

In the more flexible SIA school, teaching staff can be used in a way which is more compatible with the needs of the pupils. Teaching

can be provided in big or small groups depending on course content, working methods, etc.

The duties of the pupil assistant are at the present time formally tied to physically or visually handicapped pupils. The results of the study show that the pupil assistant also helps other pupils in the class, especially in the classes for slow learners. On the basis of previous experience, we also know that the pupil assistant can represent security for anxious, non-handicapped pupils in the class. More flexible use of pupil assistant resources of this type must be regarded as positive if it results in the teacher being relieved of certain duties in return and being able to devote more time to the physically handicapped pupil. It would also be an advantage if the physically handicapped pupil did not have to feel that he/she was receiving special treatment. It is important, however, to stress that the auxiliary resource in the form of a pupil assistant must not be utilized as a cheap substitute for additional teaching staff.

The wish has been expressed both among the interviewees and in other contexts for a reduction in the number of pupils in ordinary classes. The teacher would then have greater potential for meeting the need of the physically handicapped pupil for additional help without the other pupils being set aside and the teacher's working situation would be simplified. Classes with a reduced number of pupils are to be found in several places at the present time but experience has not been favourable in every instance. It often happens that several pupils are placed in these classes who are in need of a smaller group and/or additional help for reasons other than a physical handicap. It is not certain that the result of the cutback is the one intended either for physically handicapped pupils or teachers. It is not the size of the class per se which is decisive but the sum of all pupils' needs for individual assistance plus a number of other factors. A 'companion teacher' in the classroom can often be a better solution to the problem.

The division into years with a specified course content can sometimes be an organisational impediment to a physically handicapped pupil

attending an ordinary class if he or she has a need for a slower rate of tuition. If the pupil cannot keep up at all despite a variety of supporting measures, it is not uncommon for him or her to have to repeat a year or be transferred to a special class. Greater flexibility in this respect too has started to be observed, however. The physically handicapped pupil is allowed to study at his/her own pace and attend classes together with his/her classmates. How this is solved varies. Either the pupil receives a very great number of periods of coordinated special education in a clinic or a 'companion teacher' is used or the pupil works on his/her own material with additional support from the class teacher and possibly from a pupil assistant. Often a combination of these methods is used. It is natural to raise doubts about how integrated a physically handicapped pupil is who receives virtually all tuition in a clinic or sits and works by himself in the classroom. To be able to answer this, one must analyze the total situation of the physically handicapped pupil and compare with the total situation at other types of school. If the physically handicapped pupil feels fully accepted by teachers and classmates, mixes with classmates in breaks and during leisure and is able to live at home with his/her parents, these circumstances may offset the disadvantage of working more or less alone. It is never possible to make an evaluation on the basis of one factor.

The entire study has been concerned with physically handicapped pupils. In general terms, however, it is thought that the different resources should be distributed according to the needs of the individual pupil not according to the background to these needs. It should be possible to give pupils assistance, which at the present time can only be given to physically or visually handicapped pupils, to immigrant children, emotionally disturbed pupils and others. Not circumscribing special resources as relating to particular groups of pupils with special needs alone is also a part of the complex of problems associated with integration.

It is not possible to draw the conclusion from the results of the study that there is only one type of class which fully satisfies physically handicapped pupils' need of physical, educational and

psychosocial development. Given the variation that exists between individuals (both pupils and teachers), between individual home and school environments and between local school and treatment resources, both individual integration and class integration are needed for the time being. Given the current trend towards more flexible utilization of educational resources, a greater opportunity for the child to mix and play with other children from an early age by means of greater integration at the preschool stage, changes in values which do not stress the performance aspects alone at school, expansion of local resources for treatment, etc., the situation on which to base an assessment will probably be different in 10 years time. It is, however, already clear today that individual integration works well for the majority of physically handicapped pupils.

4.4 PRESS, subproject IV: Follow-up - "Learning for life - does this also apply to physically handicapped children and young people?"

1974-1978

There is an executive group for the project with Ingemar Olow, senior physician at Bräcke Östergård as chairman and Professor Sven-Olof Brattgård, handicap research, Gothenburg, as project leader. Project assistant is Eje Hultkvist, a consultant at Bräcke Östergård, Gothenburg.

Background: In spite of official efforts, young physically handicapped people often have difficulty in finding a line of work which suits them. Many handicapped young people have realized this and a number of studies verify the fact.

For a physically handicapped person to be able to function in a work situation, it is not only necessary for the work to match his capabilities and for the work environment to function but also for his needs for accommodation transport to and from work and the service he requires to be met. In addition to this, the handicapped persons should have acquired education and training appropriate to the demands made by the work.

Accommodation, service and transport are often such primary concerns that choice of work takes second place. Under these circumstances, it is natural that the education one acquired sometime in one's youth is not always appropriate to the work one finally has to choose. The handicapped also encounter to a greater extent than others the situation that they are unable to obtain work after the training they have received.

Aims: The aims of this study are to

- clarify and analyse factors affecting the opportunities open to physically handicapped young people for work and employment,

- draw up proposals for and test procedures for coordinated planning with and for these young people such that the resources already offered by society can be utilized to the full.

Method: The study relates to the situation for young people who have completed compulsory school in their home town or in an institution. The study is taking place in the West of Sweden medical services region.

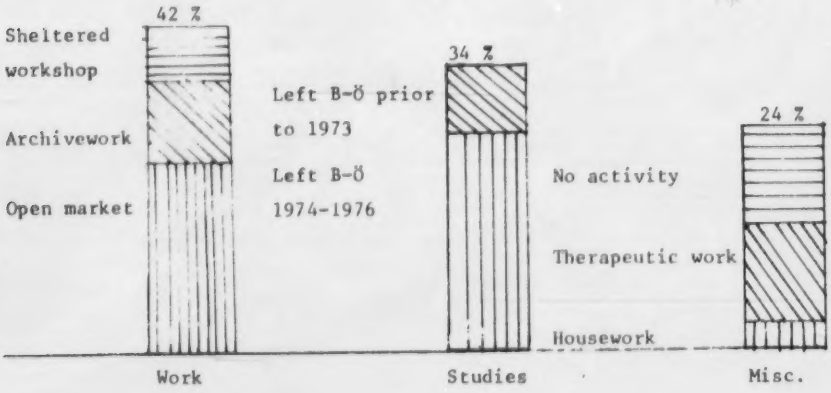
In April 1974, a questionnaire was sent out from the National Board of Education on the initiative of the sub-project IV working party to clarify the school situation of physically handicapped pupils at the senior and sixth-form levels. One of the things to emerge from this study is that the choice of sixth-form studies looks completely different for the physically handicapped youngsters than for the national average of young people in the corresponding year.
As an example, we might mention that 22.8 % of physically handicapped pupils chose the distribution and clerical option as against 7.5 % of the national average, 16.3 % the two-year social option as against 10.2 %. Fewer physically handicapped pupils than other pupils chose three-year options. For year 2, the differences between the two groups have diminished.

Results of the first phase of the study: The object of the first phase of the study was to clarify and analyse what factors govern the pupil's education, choice of occupation, employment and living conditions. This phase of the study was completed in 1978.

The young people group was divided into two groups, a) young people who had received their final schooling at Bräcke Östergård and b) young people who were known through the National Board of Education questionnaire and resident within the West of Sweden medical services region.

The results of this first phase give the following picture of the situation for young people who left Bräcke Östergård upon completion of their term of schooling from 1966-76.

Young people who left Bräcke Östergård upon completion of their schooling (1966-1976).



The second group incorporated 63 young people, who were all interviewed during visits to their homes. These conversations with the young people took up the school situation, planning of practical vocational guidance and study guidance, home and housing conditions, degree of conversion of accommodation, financial situation, to what extent the young people have benefited from the support society can offer. Other issues discussed touched on the need for attendance services,

special transport etc. Matters have also been discussed on the subject of future planning, contact with rehabilitation services, etc. The results obtained after processing the interviews show that the young people have not felt that they received any careers guidance which took their special situation as handicapped people into consideration. Only in isolated instances have the pupils had individual interviews with careers officers, none of the young people had extended practical vocational guidance as an aid to choosing studies and career. The majority of young people wished to have access to a careers officer fully familiar with the situation of handicapped young people and, furthermore, wanted more opportunities for physically handicapped pupils to take vocational sixth-form options (more educational aids are needed for these options), extended practical vocational guidance was also requested, as only a small number of the group, due to their handicap, had been able to obtain summer work and the information about working life entailed by this.

From the handicap point of view, the majority of these young people have a satisfactory housing situation today, 13 of them have set up their own household. In the case of those young people in need of care, it turned out that parents or some other relative attended to this in the majority of cases. Only in a few cases was rehabilitation brought into planning for the future of the young people whilst they were still at school. The careers guidance facilities which the employment service could have offered have not been used by the school.

It has emerged from the interviews that a desirable coordination of the variety of resources together with the young people has often been absent.

As a second phase of the study and in addition to keeping in continuous contact with the young people already involved, the project will be trying out an experimental scheme with a "named person", who is to give severely handicapped pupils assistance and advice during

their years at school on an ongoing basis, with a view to training and any action to be taken with respect to future housing and employment.

The anticipated effects of the project are to make the pupil prepared for independent living and employment and, in practical terms, to take the necessary measures to achieve this; to facilitate matters for the teachers and others in finding patterns of action with which to deal with problems associated with integrating severely handicapped pupils.

4.5 "Physically handicapped pupils in the final year of school"

The study was carried out during 1977 and 1978 by the handicap research unit of Gothenburg University on behalf of the State Board for Attendance Service. The project leader was Professor Sven-Olow Brattgård. Gulli Hilmersson, a university lecturer, was in charge of project implementation. Planning was conducted by a working party consisting of the executive committee of the Board, the educational adviser for the physically handicapped with the National Board of Education, Gulli Hilmersson and staff of the Psychotechnical Institute in Stockholm (now employed with the Handicap Research Unit).

Background: Since 1970 it has been the function of the State Board for Attendance Service to conduct experimental housing and attendance schemes for the severely physically handicapped and other severely handicapped pupils at the national sixth-form college for physically handicapped in Stockholm and, in consultation with the National Board of Education, to plan future schemes for sixth-form education for this groups of pupils.

The local commitment to measures taken on behalf of handicapped pupils in the ordinary school system has meant that more and more physically handicapped pupils have been able to receive their education in or near their home town. The number of applicants for sixth-form education at the central national sixth-form college has also decreased appreciably. The State Board for Attendance Service therefore found it necessary to conduct a general survey of how severely physically handicapped pupils in their final

year of compulsory schooling planned any possible sixth-form studies, chiefly focusing on whether they intended to proceed with their education at a school in their home town or at the national sixth-form college.

As compulsory schooling comes to an end, it is essential that the handicapped pupils receive assistance in making realistic choices of further education, vocational activities or any other form of employment. The choice can naturally be particularly difficult for pupils who need special resources whether it is a matter of adapted studies, converted premises and/or aids. The study focuses its interest on this group of pupils and the contribution which the school's educational and vocational advisory service in particular can make.

Aims: to

- analyse to what extent pupils with physical handicaps and in need of special resources plan to opt for sixth-form studies after the final year of compulsory schooling and if they opt for this education in their home town school or another

- to investigate the reason for the choice and what help the pupils receive with this choice

- analyse what need for supporting measures pupils in the final year of school consider they will have in the sixth-form college and whether it has been possible to satisfy these

- study the special problems encountered by educational and vocational advisers in their work with this group of pupils during compulsory schooling

- analyse what pupils who commenced sixth-form studies in the 74/75 and 75/76 school years are doing and what problems they have encountered in their choice and whether they have received any special help in this choice.

Method: The study is largely based on questionnaires. The level of non-response to these is high (over 30 %). In the case of some particular questions, it has been possible to procure data from another source. Pupils in classes for the physically handicapped have been interviewed. Despite certain shortcomings in method in the study which restrict generalisation on the basis of the results, there are some data worth taking up. A certain caution in interpreting the results is important, however.

Results: The study shows that there are certain differences in the choice of a future between final-year pupils in an ordinary class and in a class for the physically handicapped. A higher proportion of pupils in the class for the physically handicapped wish to do an additional final year in order to supplement their knowledge. Underlying this is principally their severe handicaps which make for slower rates of study and work and often take up more time for medical treatment.

If we discount pupils who wish to repeat the final year of compulsory schooling and those who have not stated definite plans for the future, we find that just over three-quarters (78 %) in the ordinary class have opted for sixth-form studies, the majority of them at a school in their home town. Proximity to the home and friends is the motive behind their choice of school. Of the pupils in the class for the physically handicapped, just over half (56 %) have opted for sixth-form studies but less than half of these in their home town. Others have applied to the national sixth-form college at Skärholmen, Bräcke Östergård's sixth-form classes and a couple to the Birgitta School which has sixth-form classes for hearing impaired pupils.

It is therefore clear that the pupils in special classes have a greater need than others of more adapted, tailor-made education. Since the first of July, 1978, this has been available within the comprehensive school. It is found desirable that similar resources are secured for the sixth-form college in general and not solely for the national sixth-form college and sixth-form classes at Bräcke Östergård.

All pupils who applied to sixth-form college were admitted to the courses of study they had chosen. Close on one-half chose the distribution and clerical option or the economics option. The other half are to be found distributed over 12 different courses of study with a few on each option. The reason for this extremely skewed distribution in choice of sixth-form studies is unknown for the time being.

With regard to the need for special resources and how these have been provided in the sixth-form college, it is observed in the study that the pupils wishes with regard to premises, aids, assistant help, tailor-made courses and physiotherapy have largely been complied with. For certain pupils, however, there can be problems, chiefly relating to the premises aspect.

The physically handicapped pupils who did not apply to sixth-form colleges opted for folk high school, "adjustment and training" courses, archive work, habilitation or day centre activities. Their wishes have also been met by and large. Within this group, however, there are according to the study a number of people needing additional assistance with regard to studies and employment.

Questionnaires were sent to educational and vocational advisers who had been in contact with the physically handicapped pupils in their final year. Despite the high level of non-response, some results are so clear-cut as to be worth mentioning.

The physically handicapped pupils' wishes as regards practical vocational guidance have been met in the main. Nearly all physically handicapped pupils take part in the classes' study and vocational guidance scheme and many have additional guidance, chiefly in an individual form. The majority of educational and vocational advisers, however, consider that the vocational guidance schemes, both practical and theoretical, are insufficient for these pupils. The main wishes are for aptitude tests, more practical vocational guidance and the availability of individual guidance and contact with parents. Half of the educational and vocational advisers reported that they were not in contact with the employment service

on behalf of the handicapped pupils. These same advisers also expressed a strong wish for better information about social support services, a broader medical briefing as to the handicapped pupils' potential and expert assistance in the individual pupil situations. It should be possible for closer cooperation between school educational and vocational guidance schemes and the ever-expanding habilitation service to be a way of facilitating activities, it is thought.

Questionnaires were sent to all physically handicapped pupils who started at sixth-form colleges in the 1974/75 and 1975/76 school years. Of the 70 % who replied, half are still studying, one in four at a university or institute of higher education. One in five are still attending sixth-form college even after three years, and others are studying at folk high schools, on "adjustment and training" courses or attending vocational training centres. Slightly less than a quarter have employment on the open market. Just over 1/10 are without any organized activity. This figure must be seen in relation to the number of unemployed young people in the age groups in question. It can, however, be stated that the opportunities open to severely handicapped pupils for work and employment are more restricted as their choice is reduced, which should warrant giving these pupils priority to a certain extent for those jobs they are capable of carrying out.

Discussion: The goal of the study presented here was a limited one. The principal aim was to analyse how physically handicapped pupils with special needs in the final year of school planned to choose their future activities and to what extent they received support and help from the school in making their choice. It is stressed that the study did not aim to measure to what extent the pupil felt his schooling had been positive or affected his contact with his peers, i.e. the effect of different degrees and forms of integration.

In summary, it is observed that the study shows that even severely handicapped pupils in need of special back-up can, to a large degree, complete their sixth-form studies in their home town. Even with this as the goal, one must still expect there to be a need for a certain amount of activity conducted at the regional/national level for a small group of pupils in situations where local resources are insufficient. The study also indicates a need for resources at the national level (by way of the National Board of Education or some other official body) which can be allocated to the local level. The principal task in this respect is to supply the local level with knowledge and experience of what can be done for the pupil and how assistance can best be put through in practice. In some cases, it may also be of importance if the educational staff can be expanded.

4.6 Summary of research results

For various reasons we have confined ourselves to studies concerned with the years of compulsory schooling but have made some mention of the period immediately before and after.

With regard to integration of physically handicapped children in the nursery school and school proper, developments have taken place very rapidly over the last 10-year period (Lundström, 1979). More and more are being integrated on an individual basis in both nursery schools and ordinary schools, even children with severe handicaps. Most children, parents and nursery school teachers, ordinary teachers and headmasters take a favourable view of this trend, though it has not been without its problems. Some difficulties still remain, chiefly of an educational and psychosocial nature. Teaching pupils with additional handicaps in the form of perception disorders, speech impediments, visual and hearing impairments, for example, calls for in-service training of teachers. We also know that at least one in four physically handicapped pupils at ordinary school has few or no friends at the school and/or in his/her leisure time. (Paulsson and Marsk, 1978).

About one fifth of the physically handicapped pupils attend classes for the physically handicapped. Half of these classes are situated in ordinary schools (known as class integration) whilst the remainder is attached to habilitation institutions, completely separated from other schools.

The classes for the physically handicapped are attended by many pupils with severe physical handicap and/or additional handicaps but here we also find pupils with only slight physically handicaps who, for various reasons, need the resources the class for the physically handicapped is able to offer, a secure, sheltered environment, more individualized studies, contact with other handicapped pupils, etc. In some cases, treatment facilities have been the deceisive factor but this group has diminished over the years in step with the expansion of local resources for treatment in their home town.

The increasing individual integration of physically handicapped pupils has produced changes in the mixture of pupils in the classes for the physically handicapped.

In the past, these classes were also attended by pupils who were unable to attend ordinary classes for extraneous reasons. By means of converting buildings etc., pupil assistance, physiotherapy in the home town and so on, these pupils can now be integrated into ordinary classes. Still attending the classes for the physically handicapped are a group of pupils with great difficulties demanding extremely individualized attention and advanced educational resources. We may point out here that placement of physically handicapped pupils differs according to locality. Paulsson and Grip's questionnaire survey, based on data from the 1974/75 school year, found that physically handicapped pupils with difficulties at school received different placements to some extent depending on where they lived. The proportion of pupils in ordinary classes was distinctly lower in metropolitan areas. Only 60 % of children in big cities compared with an approximate 75 % in other localities attended an ordinary class. Pupils in the big cities attended classes for the physically handicapped to a greater extent (17 % compared to 5 or 6 % in other localities). The fact that some families moved to the metropolitan areas to be nearer to classes

for the physically handicapped partly accounts for these differences.

The proportion in classes for slow learners, on the other hand, was slightly lower in the cities. The reasons were a) that there was access to classes for the physically handicapped with specially trained teachers, and b) that the winding-up of all kinds of special classes, e.g. school preparatory classes, reading classes, classes for slow learners, had advanced more quickly in the big urban areas.

In summary, it was therefore possible to note that physically handicapped pupils with some form of difficulty at school often attended a class for the physically handicapped in the big cities but were often in a class for slow learners in smaller localities so as to be able to carry on living at home.

What has then happened when all special classes have disappearad in the smaller localities too? We have no results of studies to use as a basis but, in some quarters, it has been observed that some of these pupils are now being registered with the Board for Provisions and Services to the Mentally Retarded so as to guarantee them access to the additional resources and support which the ordinary class is not always able to offer in practice.

In the cities, there are signs indicating a reverse trend. Physically handicapped pupils who were previously regarded as belonging to the special school, are sometimes being placed in classes for physically handicapped. One of the reasons problably is that there have been difficulties in maintaining the supply of pupils to the classes for the physically handicapped as more and more physically handicapped pupils are individually integrated into ordinary classes.

The possibilities of integrating physically handicapped pupils into sixth-form colleges have also increased. The national sixth-form college for physically handicapped pupils which started up a number of years ago is experiencing difficulty in recruiting pupils. It has proven to be the case that pupils prefer to carry on living at home and attend sixth-form colleges in or near their home town. The national sixth-form college in Stockholm, is principally attended by pupils

from comprehensive school classes for the physically handicapped, most of them living in or near Stockholm.

The physically handicapped pupils' choice of sixth-form options differs from other sixth-form pupils. The distribution and clerical option and economics and, to some extent, the social option are heavily overrepresented. The underlying causes are unknown, but the assumption is that the lack of adaptation for handicapped people on the vocational options partly accounts for this. There are plans to start endeavouring to make these options more practically accessible to the physically handicapped.

One of the major problems which is now beginning to come to the fore is how to coordinate the variety of personnel and financial resources required for a smooth transition from childhood to adult life. Housing, travel facilities, care and service together with studying and working facilities are closely related and must be solved in parallel fashion for the physically handicapped. At the present time, the responsibility for different resources is scattered over a great many people and official bodies but no one of these has a total grasp of the situation of the individual. We still also lack both knowledge and resources when it comes to the possibility of meaningful employment for the most severely handicapped. Often, not even the vocational rehabilitation service has the resources to tackle the problems of this group. They are put way down the list of priorities due to the extreme severity of their handicaps. In a number of places in Sweden, various experimental schemes have now been started for the purpose of finding forms of work and/or other occupations for this neglected group. One particular problem area highlighted by integration of the physically handicapped into society both as children and adults is the training of the greater number of staff categories who come into contact with the handicapped and/or are to have overall responsibility for various matters. Here a good deal remains to be done in the form of improved basic training on various courses, in-service training in various forms etc.

5 WHAT DO WE WANT TO KNOW MORE ABOUT?

As usual, studies often lead to a great many new complexes of problems. Other issues are raised by those working in the field with integration of the physically handicapped. Below, we have compiled a list of questions which many feel to be urgent matters for closer study.

1. Is learning better in a class for the physically handicapped than in an ordinary class? How can educational support and follow-up of individually integrated pupils be improved?

2. Why is a group of pupils integrated in an ordinary class transferred to a class for the physically handicapped or for slow learners within one or two years? (A study on this has just started).

3. Why do 22 % of pupils in classes for the physically handicapped attend these classes even though in the opinion of the teacher it is doubtful or not clear-cut that this is the best placement?

4. Is special material used in the teaching situation to the extent desirable? If not, what are the reasons for this? Is it only used for the physically handicapped pupil or for other pupils? How much special material is made by the teachers themselves and are the knowledge and ideas associated with this spread to other teachers and the National Centre for Educational Aids?

5. What is the best way in which to increase teachers' knowledge of special educational methods? (e.g. in-service training at teacher training colleges, visits by specially trained advisers, regular visits to "resource centres" for follow-up and educational insight or a combination of these)

6. When should one do what to achieve the best effect? - a longitudinal study of the total situation of the physically handicapped child.

7. What does one gain and what does one loose by attending an ordinary class, a special teaching group or class attached to an institution?

8. What is the picture regarding teachers' professional ambitions in relation to physically handicapped pupils? (Fear of failure or making errors; academic achievement compared to social upbringing; what do they know about physically handicapped pupils' openings for study and work after school; are teachers subjected to pressure from parents, headmasters, child habilitation etc. as regards the pupil's achievement etc.).

9. To what extent are auxiliary resources used for physically handicapped pupils and for what purposes? Is there a risk that they may be abused?

10. What is the total cost for an individually integrated pupil compared with that of a pupil in a class for the physically handicapped at an ordinary school or an institution? Who bears the various costs involved?

11. Closer checks on how children with slight disabilities are followed up in schools. (Choice of school placement and which people were involved; information to the school about the pupil's difficulties). Is there a risk that the school underestimates these pupils' problems and that this leads to excessive demands and secondary psychological problems?

12. Is it possible to devise methods of increasing contact between handicapped pupils and their classmates (both social measures such as special transportation and psychological measures)?

13. What form should the in-service training of educational and vocational advisers take? How can their efforts and coordination with child habilitation and working life be improved?

14. What pupils live in residential hostels? (Social background, home town etc.). To what extent are the pupil hostels used for short placements and relief? Are the pupil hostels always the best solution or are other alternatives conceivable in some cases?

15. Is some form of supplementary study after compulsory schooling but prior to the sixth-form college, for instance, conceivable for those pupils who have large gaps in their basic knowledge? One idea, for instance, is that the folk high school could expand the current special courses which are available in some places for physically handicapped adults with incomplete schooling to take in what is a different group of pupils to some extent. Other variants are the local authority adult education system possibly in combination with the educational associations. Age restrictions (e.g. minimum 18 years old) should be reviewed and altered if necessary.

16. How does integration function in the sixth-form college? Why do physically handicapped pupils choose so few of the options available (mainly clerical-distribution and economics)? Why do so many discontinue their sixth-form studies? Is it possible to adapt the practical subjects to the needs of handicapped pupils? Etc.

17. Review of regulations governing admission to certain vocational courses with restrictions for handicapped pupils?

18. How can the transition from school to adult life be improved in various respects, e.g. organisationally - in terms of responsibility for medical and social matters? Has the school provided the knowledge the pupil needs to make adult life meaningful?

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